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THE  
ARCHITECT

A WEEKLY  
ILLUSTRATED JOURNAL  
OF  
ART,  
CIVIL ENGINEERING,  
AND  
BUILDING.

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*Ah, to build, to build!  
That is the noblest art of all the arts.  
Painting and Sculpture are but images,  
Are merely shadows, cast by outward things  
On stone or canvas, having in themselves  
No separate existence. Architecture,  
Existing in itself, and not in seeming  
A something it is not, surpasses them  
As substance shadow.*

LONGFELLOW.

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VOL. XXVIII.

JULY TO DECEMBER, 1882.

LONDON:

PUBLISHED AT 175 STRAND, W.C.







# THE ARCHITECT

## A JOURNAL OF ART, CIVIL ENGINEERING, AND BUILDING

### SCHOOLS OF DESIGN AND SCHOOLS OF DRAWING.

**S**IR HENRY COLE, with all his faults, will long be remembered as a benefactor to the arts and a benefactor to his country. Most people, moreover, will not be too critical as regards the particular meaning which is to be attached to every word in this compliment. Every powerful man makes enemies, and Sir HENRY was above all things a powerful man;

but even the bitterest of his enemies—if any of them all could permit their enmity to continue now—must acknowledge that his memory deserves to be cherished with sincere regard as the bold and uncompromising constructor of the great artistic establishment of South Kensington. Nevertheless, when we look more closely into the matter, it may be seen that, whatever it may be as a show, South Kensington as a school has a very serious flaw in its constitution, and that the artistic interests of the country, at the present very trying time, threaten to suffer materially in consequence. The flaw is that the teaching of drawing is confounded with the teaching of design. Indeed, it is called by the name, and the Schools of Design of England are, in the eyes of experts, mere drawing schools.

In this journal we have several times during the last few years taken occasion to direct attention to the opinion that architects' offices are probably destined to be the nurseries of ornamental art at large; and the contrast thus indicated between the work which is done in such places of business and that which is done in the Schools of Design, may be at once suggestive to many readers of the line of argument which we are disposed to pursue in objecting to the South Kensington system.

It is not necessary to inquire into the origin of that system, or to weigh precedents and authorities in its favour. The English intelligence when directed towards artistic work may claim to be peculiarly constituted. It is essentially a common-sense intelligence, relying upon substantialities much, and upon superficialities little; but at the same time it is often deficient in those instincts which are the hereditary possession of some other nations, and it is therefore too ready sometimes to be satisfied with the superficial when the substantial is not clearly discerned. It is not brilliant, that is to say, nor effervescent, nor quick; it is dull, rather and slow; but neither is it frivolous nor flippant; it is thoughtful according to its lights, patient and plodding, and occasionally philosophical.

Accordingly, it seems to us that, with predispositions of the nature here described, the thing which our English artistic students especially require is to be trained in technical principle. The why and wherefore ought always to be well considered. It is not enough to acquire by practice a certain sleight of hand. The substantial which always underlies the superficial ought, in other words, to be the more particular subject of exposition and exercise. Hence, therefore, as we venture to say, the superiority of the kind of training which is

obtained in a good architect's office over that kind which is had at the Government schools, under the South Kensington system and generally under South Kensington teachers.

Now there is perhaps no other characteristic of South Kensington which more strictly identifies the whole organisation with the spirit of Sir HENRY COLE as its founder than the circumstance that superficial criticism usurps the place of substantial. Drawing represents design. Mode is taken to be mind. To imitate well is to originate. The facile hand is the understanding. A mechanical pencil is the genius of art.

We do not say that Sir HENRY COLE was a shallow man. An amateur he was, of course; never anything like an artist himself, but an admirer of art; a born administrator of many things, and, amongst the rest, of things artistic and educational; but a superficialist by the very nature of the case, a man of vigorous action rather than of calm reflection; a soldier, not a philosopher. But, even without himself being shallow, such a man would be very likely to make shallow work of such an object as art; and if it is the general opinion of artists that South Kensington is a shallow organisation, it is not therefore to be wondered at. Drawing, in fact, becomes shallow design.

Fortunately for England nowadays, the spirit of technical art is stirring up the minds of practical people all over the land. Not only at metropolitan headquarters, but almost still more at the provincial foci of our various manufacturing industries, the natural enterprise of the people is exhibiting an earnest desire to vie with certain foreign nations in all that can contribute grace to the products of our unrivalled manual skill. This grace is discovered to be the thing that we emphatically want, and must have. Without it we should have to give way in the world's markets; and we cannot consent to do that. Schools of design, therefore, are being set on foot everywhere, and drawing is becoming almost a national pursuit compared with what it was twenty or thirty years ago. For this we have still to thank Sir HENRY COLE more than any one else. But if we are to have Design and not mere Drawing, we shall have to thank some one else. It is no small thing to have introduced the drawing-master; but it is not by any means enough.

The true technical education of a decorative artist must be carefully based and built up on a primary knowledge of the structural principles which are the vital essence of his fabric. Take a carpet pattern which is woven and a carpet pattern which is printed; or make the same comparison in any other textile material. Every one knows now—criticism has at least got thus far—that the one of these patterns, even when the two are precisely the same and the materials are the same, is a mere nonsense pattern. The other may be bad enough in its way, but this is worse than bad; it is insulting to the understanding. Far be it from us to say that the instinct of a Frenchman would tolerate the printing in place of the weaving; but we are very much disposed to suggest that there are a good many somewhat similar instances in which the plain and sluggish common-sense of the Englishman is in a manner more fastidious, if it has fair-play, than the bright and hasty instinct of his neighbour. Neither would we care to assert plainly that Sir HENRY COLE personally would have sanctioned the sham pattern, or that any one of his successors in particular would sanction it now; but what we fear is that there is not a little



in the disposition of South Kensington formulas as a whole which is calculated to overlook permanently the underlying elements so long as the superficialities seem to be according to rule. If we are able to affirm with confidence that the distinction here apparent is that which divides the professional artist from the amateur, and if, as is generally supposed, there has always been a jealousy between artists as a body and the officials of South Kensington as a body, it would seem that we do not require to go any further than this for the discovery of the reason. If the Government schools ignore, or are inclined to ignore, the principles of design, a separation from such as are professors of those principles through the life-long study of them and of their noblest traditions could not by any chance be avoided, and less perhaps in England than anywhere else.

We may take it, therefore, that in effect there has been for many years a subdued but still persistent desire on the part of the artistic world properly so called to see the schools of design change front. Drawing, it has been said a thousand times, is all very well so far as it goes, but it goes only a little way towards the art of design. No doubt without it a man is without the very alphabet of design; but with it, and nothing more, he has language and nothing more. Given the fancy, it may be replied, and what else can be wanted but the medium of expression? And supposing fancy to be absent, what more need be said? This argument, however, is not only much less conclusive than it seems, but it is almost a play upon words. Whether design can or cannot be taught is a question that need not be argued any more; fancy is a question of degree, and so is design. In its common form, design, proceeding perhaps upon only a small measure of fancy, if it cannot be taught in one sense, can certainly be acquired in another, and the way to acquire it is to study its practice on the basis of its principles.

If England, then, is to aim at a rivalry with France, Belgium, and Italy, in the practice of applied grace, the superficial must be much more supplemented by the substantial, and the mere language of drawing must be more subordinated to the underlying thought. Strange to say, it is almost exclusively in architectural work that this is at present done. In that art, even in a humble form, the learner is obliged to be taught that, without a knowledge of the construction of a building, the superficial configuration of it is but a mockery. In England, we may add, this is almost better understood than on the Continent; our articulation of building design, when at its best, is more complete. Every other kind of decorative art, also, has its own articulation, and a school of design is a school of this. A school of drawing is a school—and may be a very good one—of the language which it is necessary previously to acquire for its expression; but we cannot stop short at mere language. Our schools of design, in a word, must be made technical schools, or they will soon be left behind.

#### THE "NAPOLEON" OF MEISSONIER: A STUDY OF PICTORIAL POETRY AND PROSE.

"I AM broad, I am broad," the Iron Duke repeated to Mr. LESLIE when giving a sitting for his portrait in the *Coronation of Her Majesty*. He appears to have been as ready to indicate the same exceptional proportion to CHANTREY, for it is certainly fully rendered in the equestrian statue in front of the Royal Exchange. To Sir THOMAS LAWRENCE he said:—"It is my habit to stand equally on both legs at once, and it is my wish to be represented so." The Duke, therefore, did his best to secure to posterity a conception of his personality that should be accurate in some principal characteristics; and it was probably only due to a private theory of the painter as to proportions susceptible of dignity or beauty, and to no injunctions of his own, if the profile and prominence of his nose are found to lack such emphasis in the picture as they asserted for themselves in real life, by being foreshortened in directly full-front presentation. We are not aware of any cautions or suggestions having been given by NAPOLEON to the artists to whom it was permitted—if to any—to make studies directly from the life; there was so much beauty in his features that management for the purpose of suppression was not required, and the characteristic expression of supreme self-contained command which was required to harmonise with his habitual attitude before the French nation—that nation which, whether or not, as his testament affirmed, he loved so well, at least he understood so well—was too notorious to need insisting on. The portrait, full-length, which represents

him at Malmaison, is said to be the most truthful to nature, and it corresponds with the accounts of the exceptional shortness of his legs in proportion to his body. That the portraits should not betray the fact that he was short of stature is not surprising. If WELLINGTON wished to be represented at least as broad across the chest as he actually was, less eminent men are seldom careful to make a point of not being exhibited taller and of more liberal bulk than they are entitled to. Not only photographers, with their fictitious upholstery for the benefit of the undersized, but painters also, are often chargeable with keeping out of sight that truthfulness of relative proportion even to column and curtain, to volume or despatch-box or door-step, that would enable the spectator to appreciate magnitude and mass of their subject by a legitimate scale. The artists of our day have to take thought of the existence of permanent photography, which, with merciless justice, as far as features are concerned, will deposit in historic archives the prosaic facts which genius cannot safely ignore even when venturing on its most daring attempts to render them as poetic. We have no such testimony to confront with the counterfeit presentments of NAPOLEON—except, indeed, the cast from his face after death—and, literary evidence apart, might rest upon a Napoleonic legend in art as extravagant as that which is rampant in the "History of the Consulate and the Empire." Should we be very great sufferers thereby? Artistically, it may be doubted. A succession of portraits by various hands and at frequent intervals indicate the most marked changes of appearance of NAPOLEON, from the General of the Directory to the First Consul, the Consul for life, the Emperor, the exile. It is for imagination—imagination exercising its most legitimate function—to impart to any one of these the expression which no photograph could ever have caught—the expression which embodies the very spirit of a prolonged tension of the faculties, of confidence in empire absolutely founded and destined to constant expansion, and of sense of an impending or a consummated crisis.

The small picture by MEISSONIER, which has recently been sold for the price of what was once thought an estate, represented NAPOLEON on horseback, with suite and troops just visible, as he appeared—as he might be supposed to have appeared—in his last fatal and brief campaign of 1815. The sentiment of the picture was entirely obliterated by the critics, who opened pretentious appreciations of it with the blunder of interchanging a quadruped and a battle-field; and, instead of NAPOLEON on his horse "Marengo," saw in it NAPOLEON—the youthful NAPOLEON—at the battle of Marengo. Very differently indeed was the aspect of the *grand homme* to be realised years after. His long locks had shortened and had thinned; the tone of his muscles was relaxed—his face even suggestive of the flabby; the faintly-olive complexion unhealthily yellowish in its paleness; and care, and even depression, were on their way to hold their own in its expression against self-reliance, alert observation, and concentrated reflection. But in the picture is still given an expression of dignity—of dignity sufficient to impress us that his type is not yet that of an exhausted volcano, but of a volcano which has in reserve the elements of a terrific explosion, even if it must be the last. The noble horse, seen almost from the front, implies the still subsisting energy of its rider, to whose pose and attitude it gives elevation.

But now what of the reality? Thiers, who writes his History of the Consulate and the Empire with constant crackle and sparkle, as if himself a link in the electric circuit which had its origin in the marvellous endowments of BONAPARTE, gives a sketch of the successive stages of his combined physical and mental developments, a sketch which lends itself to some of the artifices by which the pictorial is heightened to the ideal. He says that—

NAPOLEON originally was spare, taciturn, and even in youth gloomy—gloomy from that suppressed ambition which preys upon itself till the time that it bursts forth and achieves the object of its desires; by degrees, as he acquired confidence in himself, he exhibited the positiveness of a young man, while all the time continuing morose. Then, as admiration began to declare itself about him, he appeared more open and placid; he became a talker, lost his characteristic spareness, and in a word widened out.

As Consul for life, Emperor, victor of Marengo and Austerlitz, he no longer very much controlled himself, but still did control himself; at this time he appeared at the apogee of his character, and being but moderately stout, he was radiant with a regular and masculine style of beauty.

After that, as he saw nations submit to him and sovereigns humble themselves, he no longer maintained regard either for man



or for nature; he dared all, undertook all; he became gay, familiar, unrestrained in language—expanded fully physically and mentally; he acquired an excessive *embonpoint*, which nowise diminished his Olympian beauty, maintained with his enlarged face his glance of fire, and if from those elevations where men were used to see him, admire him, fear him, hate him, he descended to be a joker, familiar, almost vulgar, he regained them as suddenly after having descended for an instant, knowing well how to lay aside his superiority without compromising it.

When at last it might be believed that he had declined in activity or adventurousness, because his body seemed to encumber him, or because Fortune no longer smiled upon him, he sprang with more impetuosity than ever on his battle horse, giving proof that for his ardent soul matter was destitute of weight, and misfortune of the power of crushing.

This description manifestly degenerates into fine writing at last, but it does so not without a rhetorical purpose, if history a little suffers. It is a point of honour with THIERS never to make an admission to the discredit of his hero, unless to gain credit on the strength of such candour for some extravagant exaggeration in his favour. The admissions and exaggerations are here curiously intermingled, and we are left to realise as best we can the fiery glance on the flabby face of an over-fat Olympian as he vaults on his war-horse with an activity that is above having regard to the law of gravitation. Such vagaries of an historian may furnish suggestions for a caricature, but scarcely to a painter for an heroic ideal of a hero struggling with combined infirmities and consciousness of declining fortune.

The Baron D'ODELEBEN, in his account of the persistently unfortunate campaign of NAPOLEON in Saxony in 1813—written throughout with marvellous freedom from either malice or extenuation—gives an account of NAPOLEON'S horsemanship—and he was constantly near him—which suggests that THIERS only speaks figuratively of the spring on to the war-horse. NAPOLEON, he says, was but badly mounted for an emperor; of the eight or nine horses reserved for his use many officers would have been ashamed to mount any but one Arab. He was but a poor horseman—had, among other irregularities, that of holding his reins in his right hand—and had so little command of his horse that it behoved those who unwarily approached him mounted on mares to look out for their own safety in their saddles. With regard to his personal appearance "at this time, when during a battle or on the march, he came into a group with the King of Naples, MURAT—the *beau sabreur*—the contrast was so striking that it was difficult to abstain from laughter."

Whatever may be the case with intelligent authors and readers, the artist who has to give in effect "the very age and body of the time, its form and pressure," can but be thankful for authentic records of the costume as of the personal characteristics of the great figures of history. How precisely the same artist cares, or ought to care, to adhere throughout to the specifications must depend on the extent to which they are by accident notorious, and in consequence indispensable, and then on their susceptibility of being made subservient or conducive to the expression of moral characteristics of an incident or an epoch. Mere costume, though accurate to the last button, will not revive the impression of the manners of a man or of a period, and much less will it suffice to reproduce character and do duty for sentiment. When it is relied on exclusively, or even disproportionately, the painter, whose best resources should come from the creative faculty within, sinks into a mere costumier; at best he takes up the position of an ill-controlled scene-painter who obtrudes himself on an audience hungering for SHAKESPEARE himself, and who obscures the poetry to which it should have been his noblest triumph to have succeeded in lending some entirely secondary enhancement. Such is not what is seen in the pathetic work of MEISSONIER. The conqueror of banded Europe in a hundred fights was marked at once by his habitual uniform and hat and riding-coat, and if he sat a better horse with better dignity than chroniclers avouch, this was an artistic concession, like the moderation of his advancing unwieldiness to the awful aspect of a moral collapse, which could make all such drawbacks to dignity as unobserved as insignificant. But the entire moral of that marvellous story of unexampled mental and physical energy and resources, at last on the brink of exhaustion and of defeat by such a coalition as nothing less than such an ambition could ever have provoked into combination, is written legibly by the painter in the outlines of the face, the complexion, and the fixity of glance of the Emperor,

inevitably on the verge of becoming conscious that, interpose what obstacle he might for a time, he must soon be fatally at bay.

### EGYPTIAN ANTIQUITIES.\*

ONE of the earliest accounts of the discoveries at Dair-el-Bahari described the amazement of BRUGSCH Pasha when he first entered the subterranean gallery. For several minutes, it was said, he remained in silent awe, overpowered by the sight, and unable to do anything but gaze at the magnificent cases containing the mummies of so many of Egypt's kings and queens, with the papyri, statues, and other treasures. No stronger testimony could be adduced to suggest the value of the discoveries. There must have been something extraordinary in the collection which was capable of overcoming an Egyptologist possessed of so much knowledge as the Director of the Boulak Museum. There is often at first much exaggeration about the importance of archæological discoveries, but the objects found at Dair-el-Bahari have stood the test of scrutiny, and no savant will hesitate to admit that they enlarge our knowledge of ancient Egyptian life, and more especially of the relations subsisting between the omnipotent priesthood and the laity.

It is, however, a remarkable circumstance that the discovery of the Dair-el-Bahari treasure will not be associated with the name of any explorer. BELZONI, RÜPPELL, CHAMPOLLION, WILKINSON, SALT, and others, who worked in the district about the "Northern Convent," have gained fame, and their spirits need not be troubled because one tomb was overlooked; but later explorers have reason to grumble against their ill-luck. Mr. VILLIERS STUART was very nearly securing a prize which would make his name immortal. He says that five years ago he was convinced of the existence of a reservoir of eighteenth dynasty objects. It was known only to a couple of Arabs at Thebes, and the two were actually in his service as guides in 1878-9. If they had given him a hint there would be not only the gain to Mr. STUART, but many articles which are now dispersed might have been secured. The treasures must have a greater interest for him than for most men, and Mr. VILLIERS STUART has accordingly supplemented his valuable "Nile Gleanings" by a description of the latest additions to the Boulak Museum. From his knowledge of the subject he is able to make the book a disquisition upon Egyptology.

The tombs at Dair-el-Bahari for some [unknown reason were liable to invasion. WILKINSON, when speaking of what is known as *Belzoni's Tomb*, says that the deviations in the direction of it and the steep descent are "admirably calculated to mislead, or at least to check the search of the curious and the spoiler." The tomb which is described by Mr. STUART is also difficult of access. There is a narrow shaft, with corridors running right and left, and which, unlike those in other places, are without sculpture or painting. It was in those corridors that the treasures were found, and they consisted of "about forty mummies of kings, queens, princes, and princesses of the 17th, 18th, 19th, and 20th dynasties, together with about 6,000 articles belonging to their sepulchral furniture and equipment. Amongst the miscellaneous articles were statuettes, boxes and caskets, vases, goblets, articles of wearing apparel, papyri, &c." One of the mummies was that of THOTMES III., who is supposed to have lived 200 years before the birth of MOSES, but when it was opened the features crumbled to dust, to the great remorse of the Director. The flowers wreathing the body were well preserved, and a wasp, which had been attracted by them three thousand years back, was dried up, but still perfect.

One of the objects found in the tomb was a canopy or tent which had been used at the funeral of Queen ISI-EM-KHEB. This is described at great length by Mr. VILLIERS STUART, and from his measurements geometrical drawings are given, and a large chromo-lithograph, one-sixth the size of the original, showing all the colours. An extract will suggest the character of this unique work:—

The tent itself may be described as a mosaic of leather work, consisting of thousands of pieces of gazelle hide, stitched together with thread of colours to match. The edges are neatly bound with pink cord of twisted leather, sewn on with stout pink thread; each colour is a separate piece, no one section bearing

\* "The Funeral Tent of an Egyptian Queen, together with the latest information regarding other Monuments and Discoveries." By Villiers Stuart, of Dromana, M.P. With numerous illustrations. John Murray.



two colours; thus each square of the chessboard-patterned footstool, upon which the gazelles are kneeling, is a distinct morsel stitched to its neighbours. The whole work is, in fact, a mosaic, and is the only example yet discovered of what may be called ancient Egyptian tapestry. The colours consist of bright pink, deep golden yellow, pale primrose, bluish-green, and pale blue. They are wonderfully well preserved, considering that they were laid on not long after the Trojan war, and are contemporary with SOLOMON. Much of the surface still retains a gloss similar to that of a kid glove; the pink, yellow, and green have not faded at all, though dulled to some extent by the dust of ages. . . . The canopy consists of a great central panel, 9 feet long and 6 feet wide, divided into two equal sections. One is covered with pink and yellow rosettes on a blue ground; the other displays six vultures, each surmounted by a hieroglyphic text, and divided from its neighbour by a row of pink rosettes on a yellow ground. At either side is a flap divided from the central section by four bands of colours—blue, red, yellow, and green; and further ornamented with a border of spear-head pattern. Below this comes a row of panels containing various emblematical devices, and below that again is a chessboard pattern of pink and green squares, bordered at bottom with a broad belt of pink. At both ends are flaps presenting the same arrangement of chequers when spread out flat. The entire fabric measures 22 feet 6 inches in length and 19 feet 6 inches in width, and covers a space of 201 square feet of leather.

The canopy was employed to cover the shrine of the queen when conveyed in the funeral boat to Thebes—a scene which will recall a picture by Mr. BRIDGMAN in the Royal Academy Exhibition of last year. Mr. VILLIERS STUART explains the details in order; and as the different figures had a symbolical meaning, the pall becomes a sort of key to the religious system of the Egyptians. Thus, for example, the cartouche within an oval border represents the king's signet-ring used for stamping, and suggests that life would be again stamped upon the remains of the queen. The scarab is the emblem of life out of death; the vultures with outstretched wings indicate that the heavenly powers protected the queen against evil; the blue ground is the vault of heaven. Concerning the meaning of the figures of the ducklings (two are placed back to back to form a conventional symbol), Mr. VILLIERS STUART is uncertain, for the device was before unknown; but he supposes that, like so many other figures, it is a symbol of the renewal of life. In one of the inscriptions, "ISI-EM-KHEB" is said to be "Queen of the Land of the Papyrus and the Lotus," and this gives an opportunity for the author to explain the reasons for the estimation in which those plants were held by the Egyptian. In describing the lotus, which so often appears in the paintings, he writes:—

The lotus grows abundantly on the Delta. It is its most characteristic water-plant, has large handsome blossoms and graceful buds and an edible fruit, and was well fitted for an emblem of Northern Egypt. The difference between the lotus and the common water-lily is that the latter has round petals like rose leaves, whereas the petals of the lotus are sharply pointed, and the flower, instead of floating on the water, rises erect a foot or more above its surface. It acquired additional importance because there were scarcely any other wild flowers in that region, and the Egyptians were evidently fond of flowers. We laugh at the æsthetics of our own day, but they are by no means a new invention. "We smell lilies" might well have been said of the ancient subjects of the PHARAOHS, for they are everlastingly depicted on the monuments seated on stools at their feasts and sniffing the lotus. It is no doubt from these tableaux that the name lotus-eaters was given them by HOMER, HERODOTUS, and other Greek writers. We learn from the wall-paintings that in ancient times the blue and pink lotus of India grew either spontaneously or as a cultivated plant, as well as the ordinary white variety. The edible portions of all of them are the seeds or beans contained in the cup-shaped seed-pod; they have a nut-like flavour, and can be eaten either raw or boiled, or ground into meal and made into cakes. It is curious that to this day the Japanese regard the lotus as a sacred plant, and offer it to their gods as the Egyptians did of old.

The second part of Mr. VILLIERS STUART'S volume describes a late visit to the pyramids of Dashoor, Meidoum, and Sak-karah. He considers the brick pyramids of Dashoor to be of the most remote date. It was conjectured that either at Dashoor or at Fyoom was the tomb in which the first arch was constructed, and which bore the famous inscription, "Compare me not to the pyramids of stone, which I excel as much as ZEUS surpasses the other gods." In one brick tomb Mr. VILLIERS STUART found a vaulted brick chamber. He says that "the arch is not, strictly speaking, keyed, but the wedged form which the cement naturally and necessarily took between the bricks all round the curved surface answered the same purpose."

In the third part Mr. STUART gives an account of the continuation of the excavations in the tomb of a governor at Thebes, which he discovered in 1879. It belongs to the reigns of AMUNOPH IV. and KHOU-EN-ATEN. One monarch, as represented in the bas-reliefs, is a thorough Egyptian, and is surrounded with Egyptian accessories. The other belongs to some foreign race, and with him are the signs of a new kind of worship. The courtiers wear strange dresses, and have strongly-marked Semitic features. The illustrations of the reliefs have been reproduced from casts, and are very remarkable. It was supposed by scholars that the two monarchs were one and the same person; but if this theory be accepted, it is difficult to know what to make of figures which are so widely opposed. The Semitic courtiers are evidently portraits, and it is a relief to find so much variety in Egypt, for artists were accustomed to adopt a stereotyped cast of features in their representations of kings and nobles.

There is a curious chapter on the language of ancient Egypt, which has been written in support of the theory that there is an affinity between the modern German and the Egyptian languages. Mr. VILLIERS STUART believes "the ancient Egyptians to have been of the so-called Indo-Germanic race, that they migrated from Asia *viâ* the Straits of Bab-el-Mandeb into Africa, sojourned for an unknown period in the region of Africa which adjoins those Straits, and then took possession of the valley of the Nile. They are identified with the Indo-Germanic race by their language, by their features, by their pottery, by their mythological traditions."

The Society for the Preservation of Ancient Buildings might with advantage turn attention to Egypt. The temple at Dair-el-Bahari has been terribly wrecked since 1879, and some of the subjects which were illustrated in Mr. VILLIERS STUART'S "Nile Gleanings" have disappeared. Plates of bas-reliefs are accordingly published as records. One is of the litter of THOTHMES I., which is carried by six slaves; a second is of a caged lion on board a boat. It is often said that the Egyptian figures are little more than conventional, but there were occasional attempts at realism. A figure of THOTHMES II. at Dair-el-Bahari has shoulders so broad that it was concluded the artist had been careless. But on opening the king's coffin it was discovered "that owing to the abnormal breadth of his shoulders the sides of the coffin had to be cut away to enable his corpse to be fitted into it."

Mr. VILLIERS STUART'S book is an important contribution to Egyptology, and gives English readers an opportunity to realise the appearance of things about which much has been written in the newspapers. There are some curious repetitions in the book which are suggestive of haste, and which should be rectified in the next edition.

#### NOTES ON THE HAMILTON SALE.

THE sale of the Hamilton Palace pictures has been watched with jealous anxiety—an anxiety thus far happily appeased. It is true that certain historical portraits in the first instalment of pictures might have been to advantage secured for some one of the national collections, had we not already sufficiently accredited portraits of the same individuals and examples of the same masters. Still, we confess to regret that the beautiful sketch, rather than finished bust study, of the unfortunate *Queen Henrietta Maria* by VANDYKE was let slip. Moreover, the equestrian portrait of *Charles I.*, though only one of many such treatments by VANDYKE, yet was an exceptionally fine example. The *Edward VI.*, being tangibly a copy of the HOLBEIN in the Royal Collection, of course fetched more than its worth, if anything, and need not be lamented; but the small panel of *Lord Seymour* was undoubtedly a fine picture, with full as much internal evidence of HOLBEIN'S hand as many an authenticated work. The delicate drawing of the eyes and mouth were especially characteristic; the manner, too, in which the chain and filigree metal drops to the doublet were painted, also indicated the accurate finesse of the master. Altogether, we are inclined to think that the depreciation of this historic work was an unfortunate accident. The little picture assigned to DE BLÈS, which the directors of the National Gallery bought, was a valuable acquisition as a link in the history of styles.

But whatever may have been the disappointment felt at the result of the first sale as regards the claims of our national collections, ample compensation has been made by last week's work. Mr. BURTON, directly or through others.



became the successful competitor for the choicest pictures in the assemblage—viz., first and foremost, the grand *Assumption of the Madonna*, by BOTTICELLI; *The Adoration of the Magi*, likewise assigned to BOTTICELLI; the two figures of *Vestals*, in monochrome on an agate ground, by MANTEGNA; the *Portrait of a Gentleman*, ascribed to DA VINCI; the *Story of Myrrha*, by GIORGIONE; and the *Christ washing the Disciples' feet*, by TINTORETTO; the sum expended on these six pictures being 10,185*l.* The selection of precisely these pictures for a 'fight' shows the advantage of having a director over our Gallery who is swayed by no mere antiquarian enthusiasm or official adjustment of values. Out of these six noble pictures the great BOTTICELLI has an absolutely unassailable authenticity, but the other work of the master, the DA VINCI portrait, and the GIORGIONE subject picture, are, so far as mere external evidence of authorship is concerned, sufficiently liable to dispute to excite those fine questions of authenticity, of derivative styles and artistic analogies, over which it is the delight of *cognoscenti* and critics to descant and disagree.

The *Assumption of the Virgin*, which has been won for the National Gallery against the competition of M. GAUCHER, acting for the Louvre, is in every way an exceptional picture, and about its origin gathers one of those picturesque chronicles which bring the painter and his time in vivid reality before us, and make the picture eloquent of weighty matters. SANDRO FILIPEPI—or BOTTICELLI, as he was called after his goldsmith master—was a painter of a "distinct faculty," a poet, and delighting, as the many-sided artists of his day were wont to delight, in things of the intellect and the imagination; yet a draughtsman especially able, and gifted with the cunning precision of the goldsmith's craft in which he learnt his art. A student of DANTE and a lover of classic myth, yet in later life a follower of SAVONAROLA, here was the very painter to portray in order due the heavenly hierarchies, and what of high poetry the sacred legends of the Church might suggest. Here was the very man for a patron like MATTEO PALMIERI, himself a writer in *terza rima* of some fantastic *Divina Città*, embodying the wildest notions of Alexandrine philosophy. BOTTICELLI certainly had a commission from this PALMIERI, and some say the patron gave the whole narrative design of the picture; but one can well imagine that the painter would fill up all that might be wanting of poetic consistence; and here we have the vision before us: lily-filled tomb of the VIRGIN and group of Apostles; donor and his wife on one side in pious observance; above, the ascended MADONNA kneeling for the benediction of her Divine Son; and concentric circles of angelic hosts, saints, elders, apostles, cherubim, radiant about the centre glory of the Ineffable. The picture was given as altar-piece to a chapel in the church of San Pietro Maggiore; but evil tongues, jealous of BOTTICELLI, scented heresy in the scheme. Down came ecclesiastical censure; the picture was hidden against hurt of the faithful by a curtain, and the altar interdicted for their prayers. Some say that the PALMIERI poem, "*Divina Città*," was supposed to be embodied in the picture, and the art therefore was redolent of vain and heretical philosophies to priestly minds; some say that BOTTICELLI himself was "suspect," what with his "Commentary" on DANTE (whatever that may have been) and his nineteen designs for the "*Inferno*," not to speak of those sympathies which made him side with the dangerous friar at San Marco.

There are two engraved designs—the one an *Assumption*, the other called *The Preaching of Fra Marco di Monte Santa Maria in Gallo*, attributed by HENRY OTTLEY to BOTTICELLI, which are interesting in connection with this picture. The last of the two, OTTLEY seeks to identify with SANDRO's plate mentioned by VASARI, the *Triumph of the Truth of Fra Girolamo Savonarola*. The internal evidence is strong in favour of this inference. The treatment of the subject shows, beside certain symbolic objects and the figures of the preaching friar and his auditors, the earthly globe, and above it the vault of heaven, in zones wherein are the fixed stars and the planets; above, again, the CHRIST and the MADONNA, seated; beneath, four rows of angels; on either side a central space of glory, which is encircled by cherubim. Of course, all this mystic imagery was an outcome of the immature science, speculative philosophy, pagan tastes, and spiritual yearnings which held men's minds in strange turmoil in those days of the Renaissance; it was not peculiar to BOTTICELLI. But the rapture and the artistic splendour with which he clothes the thoughts are his. This PALMIERI picture, as we view it by the light of its story and the associations that story

brings up, becomes doubly precious, not only as a noble work by the imaginative Tuscan master, but as visible embodiment of a characteristic attitude and temper of his time.

## INDUSTRIAL ART EXHIBITION AT LILLE.

LILLE, formerly L'Isle, the old capital of French Flanders, and now the chief town of the department of the Nord, is strongly fortified, and possesses, on the Deule, a citadel which is the *chef-d'œuvre* of Vauban. Since the new quarters have been added to the town the population has rapidly increased, and now numbers about 163,000. The avenues, boulevards, and squares of the new town make the visitor almost fancy he is in Paris, while several of the older buildings are quaint and interesting. The Porte de Paris, which formed part of the old fortifications, has been preserved on account of its monumental value: it is a triumphal arch erected in honour of Louis XIV., and is adorned with statues of *Mars* and *Hercules*. The Hôtel de Ville, built in 1846, in the Renaissance style, contains a museum of painting and another of design, both of which are valuable. The Church of Notre Dame de la Treille was begun in 1855, according to the designs of Messrs. Clutton and Burges. The Gothic Church of St. Catherine possesses a painting by Rubens, *The Martyrdom of Saint Catherine*, but it is unfortunately placed in a bad light.

M. Charles Rameau, a distinguished horticulturist, left his whole fortune to the municipality for the erection of a building to serve for annual horticultural exhibitions, and on June 22, 1879, the Palais Rameau was duly inaugurated. The building is of red brick and freestone, in the Italian style, and was designed by MM. Mouron and Contamine, architects, of Lille. With a light iron roof, and well lighted both by lanterns and lateral windows, it is admirably adapted to its purpose, the principal hall having an area of 2,000 square metres. When used for exhibitions of painting, some modifications are required; and the architects ingeniously employ the rings in the roof, from which depend the baskets of ferns and orchids of the flower shows, for fixing the partitions that receive the paintings.

It is this building which is used for the Exhibition of Industrial Art which is now being held under the auspices of the Mayor and Corporation, with the assistance of the vice-president of the Archæological Museum. There are only five classes: building, furniture, textile fabrics and hangings, jewellery, and the almost necessary class in an exhibition of "miscellaneous." Although small, not numbering quite 300 exhibitors, this is a highly artistic and tastefully-arranged exhibition, the *coup d'œil* on entering being really charming. A capital idea has been carried out in the issue of a large-paper edition of the catalogue, illustrated by photographs of the principal exhibits. As this is sold at by no means a prohibitive price, visitors will be enabled to preserve a *souvenir* of some veritable art treasures. The Exhibition is international; but there are few other than French and Belgian exhibitors, and only two English—viz., Messrs. Doulton and Messrs. Minton, though Maw's encaustic tiles are also represented.

The first section, "Building," includes ornaments in stone, marble, wood and metals, mosaics, and art ironwork. These chiefly take the form of mantelpieces, staircases, street doors—the *porte-cochère* in carved oak, elaborately furnished with handles, hinges, escutcheons, and knockers—flooring tiles, and candelabra. Defrennes Frères, of Lille, send four mantelpieces, including one in white marble with caryatides, which is of exceedingly chaste design. Rests for one hand, right or left, while the other is engaged in making up the fire, are ingeniously incorporated into the composition, as brass handles like those introduced into the carved oak mantelpiece of H. Chantry, Lille, would be out of character. A Louis XV. mantelpiece in white marble, by Destresbecq, Tourcoing, merits notice; and another, Renaissance, in black marble ornamented with brass and copper, by L. Evraud, of Brussels, is most effective. The same exhibitor contributes a black and green marble *cheminée* to the Cloetens *salon*, and another in Carrara marble of Louis XVI. style. Messrs. Gauthier Lestienne et Cie. send a mantelpiece and two vases—the designs of M. Boucneau, of Brussels—roughly executed in the blue stone of Soignies, but which nevertheless are highly effective. The last-named sends a classical composition of the same character in white marble, with yellow Sienna marble columns and inlaid work. Two handsome Louis XIII. *cheminées*, executed in fine white stone, with sculptures by Leplat, the designs by A. Newnham, architect, Lille, are shown by Deliens-Levasseur, of the same place. Adjoining them are some columns and a portion of staircase in artificial stone, exhibited by D. Delgutte, of Lille. Part is made to resemble marble, while the remainder has the appearance of freestone; but so good is the imitation that it does not at all suffer from being arranged side by side with the real stone. He undertakes to execute a staircase without joints and warrant it for a year. Some panels in imitation of wood and marble by Bontillier-Robert, of St. Valéry, have a very good general appearance, but are placed too high up to be examined minutely. M. H. Cabre, Pont-à-Marcq, sends some flooring tiles of natural cement, black, white, red, and yellow, which form an effective pattern. M. A. Dapsens, of Vaulxur-Tournai, sends



some tiles in compressed cement, with half-tones that would well suit the present taste, and also some excellent bricks of the same, both burnt and unburnt. The tiles of the same substance shown by Fiévé & Co., Ghent, are in bright colours. Utzschneider-Jaunez & Co. have laid down a plain but handsome floor in black, dark and light brown and yellow tiles. M. Emile Rouze, contractor, Lille, has brought together an interesting collection of specimens of the various building-stones used by him since 1860, including so-called Caen stone, Sampan's *rouge antique* and granite, and Damparis stone, which has a very fine grain and pleasing warm tint. He has also carried out a composition of Messieurs. Contamine & Liagre, which consists of one side of a room in panelled oak, decorated with old China plates and decorative chimneypiece in Norley stone. Chief amongst the parquetry floors must be mentioned those of the Société Franco-Belge de Construction Industrielle, Brussels, who show various specimens of such floors, including that at the King's Palace, Brussels, and also one side of a saloon executed in art joinery-work. A handsome monumental staircase in black hammered iron, the design embracing scroll-work interspersed with flowers, fruit, and oak-leaves, relieved by polished steel and copper is shown, by Wanters-Koeckx, of Brussels. A lustre and pair of candelabra, by the same exhibitors, are handsome in black iron and nickel ornaments; while in a *jardinière* some China asters are marvellously wrought in iron. J. Verhoogen, also of Brussels, shows an imposing iron gateway for a château, with mediæval bell-pulls, &c. M. A. Seidel, of Calais, exhibits a hollow-moulded cast-iron cill for casement windows, which makes a tight joint, intercepting the draught, and also serves as a gutter for taking off the rain outside and the condensed breath inside. To bring our notice of the building exhibits to a close, it remains to speak of the metallised cloth of M. Hautrive, of Lille, for roofing, flooring, and lining damp walls. It resembles tarpaulin, but is impregnated or coated with metallic lead, and is claimed to be impermeable to water, unoxidable by the air, non-conductive of heat, unflammable, agreeable to the view, lighter than any other roof substance, and easily laid. It is fixed by being nailed to laths, and any joints are made water-tight with cement.

Section II., "Furniture," includes cabinet-work, ivories, bronzes, ceramic ware, glass, crystal, painting on glass, and decorative paintings. M. Leopold Demeuter, of Brussels, has constructed a dining and a drawing room, fitted with furniture of different styles. The floor of the dining-room is covered with a carpet of the Brussels type, but of a uniform maroon tint without pattern. The panels of the dado are covered with a cloth woven to imitate tapestry; and the walls above are stretched in panels, with thick twilled silk of deep crimson, the upper part hanging slightly in festoons, surmounted by a kind of vallance of worked velvet. The cornice is of embossed leather and plush, and the hangings are of olive-green satin and brown velvet. The walls of the dining-room are of carved and inlaid walnut, filled in with panels of cloth painted in imitation of old tapestry; and the ceiling is framed to match, leaving white panels. The window curtains are loosely woven in cotton, and though of highly artistic design, cost only 35 francs the pair. M. P. Cloetens, of Brussels, has put up a drawing-room in modern Renaissance style, with console, mirror, and frame of imitation ebony, relieved by polished brass, producing a most striking effect. Some handsome mouldings, in imitation of bronze and polished brass, for the decoration of rooms and picture-frames, are contributed by M. A. Chevalier, of Lille. Signor Adriano Brambilla, of Milan, shows a most artistic ebony cabinet of the sixteenth century, a table, chair, &c., with designs on hawking subjects produced by inlaid ivory, pearl, silver, brass, and copper. MM. Buisne, Rigot et Fils, Lille, make a grand display, chiefly of ecclesiastical art. There is a high altar of the twelfth century, in polychrome oak, for the cathedral of Aire in Les Landes; a fifteenth-century altar, carved in oak of the natural colour; bas-reliefs, lectern, &c., of the twelfth century, for a convent in England; and a bas-relief in white marble, representing the Last Supper, for a church in Lille. M. Gorgers, of Louvain, who has gained medals in London and Dublin, contributes an elaborately-carved Gothic pulpit in oak of the natural colour, of exceedingly pure design, with several figures. The Compagnie des Bois Sculptés, Paris, show a walnut frame and mouldings, and a pair of bellows, in lemon-wood, carved by a mechanical process. Two sumptuous billiard-tables, one ebony inlaid with ivory and the other black and gold, are sent by M. C. Toulet, Brussels, both being fitted with a patent marker, which rings a bell each time it is moved.

In Class V., "Miscellaneous," which includes the original works of artists for serving as patterns for industrial reproduction, we must mention two exhibits. M. H. Leys, of Brussels, shows his art lithographs, and also his journal, "L'Emulation," with working drawings of architectural subjects. M. E. A. Jarder, of Lille, shows a new drawing-board, with panel for stretching the paper secured by iron bars, a cheap pantograph and other drawing appliances, and an arrangement for simplifying perspective drawing. The other classes merit attention, but hardly come within the scope of this journal.

To those who wish to pay Lille a visit this summer we may say that an agreeable way of getting there is by the General

Steam Navigation Company's boats to Boulogne, and then by rail to Lille, the first half of the journey being picturesque, until the dead level of Flanders is reached.

## THE SHIELD OF ACHILLES.

AN occasional correspondent of the *Glasgow Herald* has sent the following account of an interesting Roman fragment:—"Imperious Cæsar, dead and turn'd to clay, might," in this transformed state, as Hamlet says, "stop a hole to keep the wind away"; but the Shield of Achilles, in stone, used as building material, furnishes a striking example of a return to "base uses." Yet such is the case. During the demolition of a wall in the Piazza di Termini at Rome a fragment of a disc in *palombino* marble was found, and on close inspection it was seen to be covered with the several scenes which Homer describes as carved on the Shield of Achilles. Such a subject has never before been met with in remains or monuments of antiquity. In this respect the fragment of close-grained, cream-coloured *palombino* stands alone. It has, besides, a special interest at the present time, when public attention has been so vividly awakened to Homeric legends by the marvellous discoveries of Dr. Schliemann at Mycenæ and Hissarlik. Although the newly-found fragment is considerably damaged from the use to which it was applied in a thoughtless and ignorant age, yet the story it contains and the figures carved upon it are sufficiently evident.

At a recent sitting of the Roman Pontifical Accademia of Archæology—for the Pope's party pursue their studies in this science as well as the Government party—the Advocate Giuseppe Gatti exhibited this illustrated page of ancient legendary lore; and, having read a dissertation upon it, he handed it over in gift to the Municipality to be placed in the Capitoline Museum, alongside the well-known Iliac Table in the Hall of the Doves. Most visitors to Rome must have observed that triangular fragment of *palombino* marble on which, as Mr. Wood writes, "are sculptured in various groups of very minute figures the principal events of the Trojan War as described in the Iliad of Homer. To each group is attached a Greek inscription explaining the incident represented." And Braun describes the style of work as "a medium between vase-painting and gem-engraving." The historical and artistic value of the Iliac Table is shown by the same writer, who says:—"The artist who connected this series of pictures has not apparently intended to exhibit the creations of his own fancy, but seems to have made it his object to bring together the most celebrated works of art treating of the subject in question, whereby a greater interest is imparted to the whole, and its value, in many cases of doubtful interpretation, is greatly increased." And Ampère, who calls this table a "speaking index—*Index parlant*," asserts that it was offered to young Romans as a visible summary of the Trojan War to be used in school as illustrative of the Iliad or the Cyclic poems. The new treasure-trove is easily recognisable, both in material and character, as belonging to the illustrations on stone furnished to studious Roman youths. A people who engraved the ground plan of their city—its temples, basilicas, baths, forums, and streets—on enduring marble might easily illustrate the poems they studied on blocks of *palombino*.

The pictures in low bas-relief on the upper surface of this marble fragment, which is slightly convex, are separated into two plans or divisions. Between these plans is a tiny scroll or belt bearing an inscription that tells the nature of the work and the name of its author, the Shield of Achilles, by Theodore. In the thickness of the stone, polished expressly for this purpose, was engraved, in exceedingly small characters, the whole passage in Homer which refers to the subject, from line or verse 483 to 607 of the 18th Book of the Iliad. On account of a break in the stone the last thirty-nine verses are wanting, but seventy-five verses, arranged in six tiny columns, still remain, though some of these are slightly damaged. They present in many places readings which differ from the received texts; and these variations deserve to be, as they probably will be, diligently studied by philologists. Signor Gatti, who only offered a few general remarks concerning the fragment, awaits a special and detailed description of it by some learned archæologist, and the elucidation of its text by some able Greek scholar.

In his comparison of the several scenes engraved on the fragment with the description of Homer, Signor Gatti showed the exact agreement between the two, in so far as the nature of the work and the restricted space to which it is confined permitted. In the first part of the upper segment of the disc there are fragments of two or three uncertain figures, probably representing the heavens and the earth, the sun, moon, and "the starry lights that heaven's high convex crown'd," as Pope translates the passage in Homer. In the other division are scenes of the peaceful city life, expressed by "sacred pomp and genial feast," and "solemn dance and hymeneal rite." The city is seen completely surrounded by a wall, with towers rising at intervals, and the gate in front. On the same line follows another scene, of which one figure alone is visible, and he is in the act of speaking with eloquent gesture. Here, in all probability, was the delineation of the debate which arose in the Forum on "a townsman slain," and was decided by the "reverend elders" nodding o'er the case "on seats of stone within the sacred place."



In the inferior segment, on the right, the city was represented in a state of war—"two mighty hosts a leagured town embrace." These scenes are now erased; but close to the fracture of the marble a soldier of the besieging army, brandishing a sword, is plainly visible. On the left and beneath this the various phases of agricultural and pastoral life are depicted—"white flocks proceeding o'er the plains." Upon the lower edge of the disc come ploughmen, who guide the oxen and "the shining shares"; others reap "with bended sickles," and others again gather in the vintage, "the purple product of the autumnal year." Here also, over a field towards the centre, are a group of "fair maids and blooming youths" engaged in the "figured dance formed by Dædalean art" for the Cretan queen Ariadne.

In fine, the lengthy description which Homer gives of the "rich various artifice" which "emblazed the field" of the remarkable shield of Achilles formed by Vulcan in obedience to the wish of Thetis is found exactly reproduced on this marble. This, therefore, may be considered as an illustrated page of the Iliad, and especially of one of the noblest and most poetic parts of this sublime epic.

On the reverse of the marble there is a geometrical linear design, somewhat resembling the ground plan of a fortified castle. This figure was divided into 614 tiny squares, each of which contained a single letter—only a small part on the left is wanting. This is a sort of "alphabetical puzzle," for the letters of which it is composed only amount to thirty-one, and they form the words—ΑΣΠΙΣ ΑΧΙΛΛΕΟΥΣ ΘΕΟΔΩΡΙΟΣ ΚΑΘ' ΟΜΗΡΟΝ. These letters are arranged in such a way as to form the same words in whatsoever direction they may be read outwards from the centre as the point of departure. Another remarkable example of this letter and word puzzle is found in the fragment of an Iliac table formerly in the Museum of Verona, and now in the Cabinet of Medals at Paris. Here, in the anterior part, are delineated some scenes from the Iliad, with the indication ΙΛΙΑΣ . . . ; and on the back, in a series of little squares resembling the squares on a chess-board, the single letters of the phrase—ΘΕΟΔΩΡΟΣ Η ΤΕΧΝΗ. In the Iliac table of the Capitoline Museum the first word, the artist's name, has been supplied very sagaciously by Lehrs, and there is no doubt this work should be attributed to a certain Theodore, who represented the facts of the Iliad according to the text of Homer. His work served as a prototype for those who sculptured the Iliac Tables which have been preserved to our day. The title, then, on the present stone discovered at the Piazza di Termini indicates that the Shield of Achilles was delineated upon it, as the composition was imagined by Theodore following as closely as possible the description given by Homer.

It is difficult to assign a date to this fragment. The Capitoline Iliac Table is declared by Ampère to be a Roman work made at Rome. "All that concerned the Trojan origin of this city Rome," he says, "unknown to Homer, and celebrated above all by Stesichorus before Virgil, holds an important position in this bas-relief and dominates in its composition." Seeing that it was found at Bovillæ, where there was a domestic chapel of the Julian family, it is supposed to date from the period of Augustus, or one of his immediate successors. And perhaps the newly-found marble with the Shield of Achilles may have no remoter origin. The fact that it is formed of the same material as the Capitoline Table would lead one to think that the work on both was not separated by a lengthy period.

The name of the artist and the character of the art are decidedly Greek. After the conquest of Greece there was a large immigration of artists, philosophers, and rhetoricians into Rome from the conquered nation. They followed that mute population of statues which the victors bore away as spoils of war. In Rome the artists continued, with doubtful success it must be admitted, to reproduce the types of their gods and goddesses. Probably the Theodore of the tables was one of these Greek artists settled in Rome who busied himself in illustrating, "for the use of schools," the poems and traditions of his native land. With regard to the reproduction, or rather the copying of the works of great artists who had treated the various subjects represented on such tables, the copyists had sufficient material before them. It is believed that parts of the great compositions of Polygnotus at Delphi, and of the pictures of Cleantes, were reproduced in these little slabs of *palombino* marble. The events of the Trojan Wars were sculptured on the pediment of the temple of Juno, near Mycenæ. They were copied at Rome, according to Brunn, in the interior of the portico of Philip by a certain Theon. According to Vitruvius, as quoted by Ampère, the battles of the Iliad and the adventures of Ulysses formed a common household decoration. If the work of this Theodore, whose name is attached to the representation of the Shield of Achilles, was a reproduction, more or less accurate, according to the ability of the artist, of the great works already existing, which had the sanction of time and the acceptance of the people as authority for their faithfulness, it is evident that the recent discovery possesses remarkable interest. In it we see the representation of the manners and customs and modes of living of the ancient Greeks at a comparatively early period, and the philological character of the verses written on this piece of marble, which has yet to be studied and annotated, renders it worthy the attention of scholars.

## THE LATE MR. ROBERT PALGRAVE.

THE death of this gentleman—which sad event occurred at his residence, No. 9 Upper Hamilton Terrace, St. John's Wood, on Monday, the 19th instant—will cause much grief among all who knew him. He was the only son of Mr. Robert Palgrave, of the City of London and Bedford, and was born in the year 1831. He was nephew to Mr. C. F. Palgrave, who was Mayor of Bedford in 1851. He was articled to Messrs. Scott & Moffat, architects, and on leaving their office, he became, for a short time, assistant to an architect at Blackburn, in Lancashire. Returning to London in 1852, he became managing assistant to Messrs. Wehnert & Ashdown, architects, of 42 Charing Cross, now both deceased. Quitting their office in 1857, he commenced practice as an architect at 11 Pall Mall East. His first work was the Clock and Watchmakers' Asylum, at Colney Hatch, which he gained in public competition. In 1857, also, he was appointed architect to the well-known and extensive Britannia Iron Works at Bedford. These works were erected from Mr. Palgrave's designs, and were visited by General Garibaldi during his visit to England. Mr. Palgrave also designed some extensive farm buildings for his uncle, the Mayor, at Liddington; and St. Mary's Wesleyan Chapel, Bedford, and likewise Kempston Chapel, near Bedford, which were erected from his superintendence; as also the Atlas Iron Works, for Messrs. H. Clayton & Co., in the Harrow Road, London, and additions to the residence, at Bedford, of Mr. James Howard, M.P. Indeed, it may almost be said that Mr. Palgrave renovated the town of Bedford, where his chief practice lay, and his works may be seen in all directions. The chief one, however, has yet to be mentioned; this is no other than the rebuilding of the tower and other extensive alterations and additions to the venerable church of St. Paul's, Bedford. It may here be mentioned that great difference of opinion existed amongst the committee at that time for the restoration of this church as to the desirability of entrusting a work of such importance to Mr. Palgrave, even after he had made a number of drawings which were generally approved. So great, however, was the opposition that Mr. G. E. Street was called in to make a plan and a report, which were actually done before that gentleman knew Mr. Palgrave had been employed. It will always redound to Mr. Street's honour that as soon as he was shown Mr. Palgrave's drawings he at once withdrew, and strongly advised the committee to leave the matter unreservedly in Mr. Palgrave's hands. The work therefore proceeded, and the result shows its complete success. It may be stated that Mr. Palgrave was known to Mr. Street, who therefore was not advising the committee to entrust their work in the hands of an *inconnu*.

Of the before-mentioned works, the local guide, "Rambles in Bedfordshire," by Paul Betneys, thus speaks of the erection of the Britannia Iron Works:—"The premises at the 'Barley Mow' gradually became quite unequal to the trade in Bedford ploughs, and some two or three years since it made out quite a morning's walk to call round at the different works. In this hour of need the services of a rising young architect (Mr. Robert Palgrave, of Pall Mall, but himself the son of a Bedford townsman) were called in, and the present extensive and beautifully-planned block of buildings determined on, which for magnificence and utility are perhaps as a manufactory unsurpassed in England."

Of the St. Mary's Wesleyan chapel, Bedford, *The Architect* gave a very complimentary notice at the time of its erection. In 1861 Mr. Palgrave was chosen with a select number of architects to compete for the Agricultural Hall at Islington, and much preference was expressed in favour of his design, and on a division taking place between the drawings of Mr. Palgrave and those of Mr. Peck, the committee were equally divided; the chairman, however, gave his casting vote in favour of Mr. Peck.

Mr. Palgrave soon afterwards left 11 Pall Mall East and took more extensive offices at 2 Westminster Chambers, when he was appointed architect to the Right Hon. Earl Cowper, Lord Lieutenant of Bedfordshire, and for whom he designed and superintended some additions and alterations at Panshanger, Hertfordshire. This may be said to have been Mr. Palgrave's closing work, for, losing his uncle, the mayor, and both his parents about this period, he inherited ample fortunes, and soon afterwards virtually retired from practice.

The writer of this notice, who was associated with him for nearly twenty years, can testify to his sterling worth and his amiable and fair-dealing disposition. He never married, and died aged 51 years. "Reader, if you seek his monument, go to Bedford and look around you." W. F. P.

**A Royal Commission**, consisting of Lord Bramwell, Sir John Coode, Dr. Alexander William Williamson, F.R.S., Mr. Francis S. B. F. de Chaumont, F.R.S., Mr. Thomas Stevenson, M.D., and Mr. James Abernethy, F.R.S., with Mr. W. Pole, F.R.S., as secretary, has been appointed to inquire into and report upon the system under which sewage is discharged into the Thames by the Metropolitan Board of Works, whether any evil effects result therefrom, and, in that case, what measures can be applied for remedying or preventing the same.



## NOTES AND COMMENTS.

THE Paris *Figaro* publishes the statutes of a new "Academy," which MM. EDMOND and JULES DE GONCOURT propose to found. The scheme was prepared twenty years ago, and the private fortunes of the brothers are to serve as the foundation. The Academy will consist of only ten members, who will be named in the will of Mr. EDMOND DE GONCOURT; and all vacancies occurring are to be filled up by election. Each member will receive a life pension of 240*l.*, and an annual prize of 200*l.* will be given for the best work of the year, to be chosen by the Academy. All the members are to be prose writers, and, according to the *Figaro*, among the first ten named will be ALPHONSE DAUDET and EMILE ZOLA, the novelists, and LOUIS VEUILLOT.

M. CLESINGER, the sculptor, has completed the casts of the statues of KLÉBER, HOCHÉ, and CARNOT, which, together with that of MARCEAU, are to be erected in front of the Ecole Militaire. KLÉBER is represented as commanding in action, and, mounted on horseback, he appears with his lifted hand to be waving on his men to the conquest of Egypt; HOCHÉ, the pacificator of La Vendée, holds an olive-branch; while CARNOT is presented in meditative mood, befitting the "organiser of victory."

Two of the great panoramas lately started in Paris have already fallen foul of one another. A pamphlet having been published eulogising that of the *Battle of Champigny*, painted by MM. DETAÏLE and DE NEUVILLE, at the expense of the Reichshoffen Panorama of Messrs. POILLOT and STEPHEN JACOB, the proprietors of the latter entered an action for libel against the printer and publisher, claiming 2,000*l.* damages, and a prohibition to continue the publication. The First Chamber of the Civil Tribunal of the Seine condemned the defendants each to pay 40*l.* damages, to stop the sale of the pamphlet under penalty of 4*l.* fine for every proved infraction of the order, to insert the verdict in three Parisian and six provincial journals, and to post a copy of it at the very doors of the complainant's premises in the Rue St. Honoré.

THE prizes awarded to French exhibitors in this year's Salon were distributed at the Palais de l'Industrie on June 23 by M. FERRY, Minister of Public Instruction and Fine Arts. In the course of his speech the President congratulated the artists on the success they had attained since they had formed themselves into an association, and observed that he hoped they would shortly be able to erect a building of their own, though in the meantime they could count upon the Palais de l'Industrie being annually placed at their disposal. After criticising in general terms the 1882 Salon, and expressing his preference for the classic over the realistic school of painting, M. FERRY concluded by paying a warm compliment to M. PUVIS DE CHAVANNES, the recipient of the Médaille d'Honneur for Painting. After a reply by M. BAILLY, President of the Société des Artistes, the prizes were presented. M. DE CHAVANNES, on coming up to receive the Grand Medal, was enthusiastically applauded. It is stated that on the occasion of the July 14 fête, MM. ROLL, GERVEX, RAPIN, and PILLE, will be decorated with the ribbon of the Legion d'Honneur.

THE French artists who have sent works to the International Fine Arts Exhibition at Vienna, have elected the following as members of the jury to award the prizes in the French section:—Painting, JULES LEFEBVRE and BONNAT; Sculpture, GUILLAUME; Engraving, GAILLARD; Architecture, RUPRICH-ROBERT. These gentlemen will proceed to Vienna at the beginning of August to fulfil their task.

SINCE the Government have introduced an Ancient Monuments Bill, there is some hope that it will become law. Among the works to which it refers are Stonehenge, the Vallum at Abury, Kitz Coty House, Arthur's Round Table, Silbury Hill, and various stone circles in England; forts, cairns, and Pictish towers in Scotland; and earthworks in Ireland. The schedules correspond with those attached to the later Bills introduced by Sir JOHN LUBBOCK. The Commissioners of Works in Great Britain and the Commissioners of Public Works in Ireland are to become the guardians of the monuments; but their duties are not to interfere with the estate, right, title, and interest of an owner in

a monument. The Commissioners may, however, purchase monuments under the Lands Clauses Acts, or the interest of owners may be devised or bequeathed to them. It is proposed to appoint a competent inspector, who will report on the condition of the monuments and the best mode of preserving them. Injury to ancient monuments is to be punished by a fine of not more than five pounds, or imprisonment, with or without hard labour, for a term not exceeding one month. But the owner of a monument is not punishable, except in cases where the Commissioners of Works have been constituted guardians, when the owner shall be deemed to have relinquished his rights of ownership so far as relates to any injury or defacement of such monument, and may be dealt with as if he were not the owner.

OWING to the interest taken by Signor BACCARINI, Italian Minister of Public Works, and one of the most distinguished hydraulic engineers in Italy, the following works of vital importance for Venice have been approved, and will doubtless be carried out with all possible expedition—namely, the removal of the River Brenta from the lagoons; the deepening to 9 mètres of the principal navigation canal from Malamocco to the Arsenal and to Venice; the excavation of the canals at the maritime station; the construction of dykes at the Lido to impede the passage of the sands; and the raising and fortifying of the banks of the principal rivers flowing into the lagoons, to prevent as far as possible the neighbouring country from being inundated.

A RETURN has been prepared which shows the "extraordinary expenditure" of the Belgian Government during the period between the revolution in 1830 and 1881. The erection and restoration of civil buildings have absorbed 100 millions of francs, of which 6 millions were spent on the Royal Palace of Brussels, 9 millions on those of the Parliament and Ministries, 33 millions on the new Palais de Justice; in addition 48 millions have been spent on schools and universities. Fortifications and barracks have taken most of the 231 millions devoted to military purposes. The city of Antwerp has secured a lion's share of the extraordinary expenditure. The fortification and enlargement of the town cost 83 millions; the improvement of the port 49 millions, and new warehouse for goods 5 millions. In all, more than 157 millions of francs have been expended on Antwerp, and it will soon become unrivalled in the world as a fortress and harbour. The canals, rivers, and water-courses of Belgium have already cost 200 millions since 1830; 31 millions are still available, and 12 millions more are now demanded for this purpose, destined chiefly for the Antwerp quays.

THE hearing of the remarkable libel case of BELT v. LAWES, after occupying the Court of Exchequer for seven whole days, has been adjourned until November. It would be difficult to discover a case that was less adapted to be tried by a jury. The jury were not acquainted with the mysteries of a sculptor's studio, and after the second day, when there was no more novelty, they were wearied of the examination. How can it be expected that business men will be able for more than four months to retain a recollection of details, which they did not comprehend? The issue involved is whether the plaintiff is competent to model, and it might have been determined by a couple of experts in the course of a day. But the law does not recognise arbitrators' reports in cases of libel, and, in consequence, several weeks in a public court will be occupied. The probability is that, under the circumstances, the jury will not be able to agree upon a verdict, and, as has often happened before, the litigants have been simply creating profitable work for the lawyers.

LAST week we mentioned that the members of the Architects' Congress visited the Duc d'AUMALE's château at Chantilly, which has been entirely rebuilt since 1872. The new building is rich in art treasures. Among these may be particularly noted the library, one of the finest private collections extant; the Condé Gallery; the chapel, now completely restored; the splendid stables of the Prince de CONDÉ; and the magnificent picture galleries. These, together with the "Psyche" and "Stag" Tribunes in the park, are open to the public on Thursdays and on Sundays from 1 to 5 P.M.



July 1<sup>st</sup> 1882.

Nº 1.



Auguste Rodin, 21, rue de Valenciennes, Paris, France.

A DECORATIVE FRIEZE  
BY RODIN.

from the *Fontaine de la Vierge*  
at the *Hotel de la Vierge*, Paris.





LOADING THE CART WITH HAY.



## ILLUSTRATIONS.

AGRICULTURE: A DECORATIVE FRIEZE.

WHEN the world becomes wiser than it has been, people will wonder why for so many generations schools were allowed to present a cheerless aspect. Children are impressionable, and no one can tell how often among them learning has been associated with blank walls, as well as with bodily inconveniences. An ordinary English schoolroom has as little attractiveness about it as a room in a hospital. In some of the great public schools so much is historical and legendary as to render ornament less necessary, and the work of the painter or the sculptor would hardly have equal interest with the names which have been cut on walls and posts by boys who afterwards became famous. But those who are not fortunate to belong to Eton, Rugby, or Westminster, must spend weary hours in rooms which are without any halo of tradition, and where nothing is to be found that will excite the imagination. It is not in England only that dreariness is supposed to be an auxiliary to study. The French secular schools are often not unlike barrack-rooms, and it might be concluded that both kinds of buildings formed a part of the military organisation. But the authorities in France are now recognising the importance of making schoolrooms agreeable to the young. We give this week the first portion of a great frieze which has been painted for one of the public schools in Paris by M. JULES DIDIER. The original was among the attractions of the Salon this year, and will shortly be placed in the position for which it was painted in the building in the Rue Chateau Landon, in one of the most crowded districts of Paris.

No subject could be more appropriate than agriculture to place before the eyes of the children of a great city. It allows of the introduction of forms and colours which are pleasing, and, moreover, it is one which has the advantage of novelty. M. DIDIER does not attempt to make one of those moral pictures which are hateful to the sight of boys; but as he presents nothing but scenes of industry and of cheerful labour, his frieze must exercise a healthy influence on those who have to see it daily.

The illustration we publish is an untouched reproduction of the original by Messrs. SPRAGUE'S ink-photo process, and it may be said that all the strokes of the painter's brush have been preserved. It will be remembered that as the original is a frieze, and consequently will be hung at a distance from the spectator, our illustration must retain some of the characteristics of a painting. It would be unfair to judge it as if it were an engraving composed of fine lines or minute stipples. If placed in the proper position the breadth and vigour of the figures will be apparent.

## THE GLASGOW SCHOOL ACCIDENT.

IN March a play-shed attached to the Pollockshields Board School collapsed, and in consequence four children were killed and nine were seriously injured. The master joiner who in 1878 contracted for the work, his foreman, and the inspector of buildings, with two joiners who in 1881 contracted to remove and re-erect the shed, were last week charged in the Glasgow Circuit Court, before Lord Young, with culpable homicide and culpable neglect and violation of duty.

It was contended on behalf of the two defendants and the inspector who originally erected the shed, that there was no distinct statement in the indictment to show that the fall of the shed was attributable to defects in the wall-plate or in the construction. But even if defects existed they should have been seen by the second contractors, and be rectified by them. If an inferior kind of wood had been used for the wall-plate it was a violation of the contract, and was a subject for civil remedy and not for a criminal remedy. The whole of the indictment against the three defendants amounted to no more than this, that they put up a shed which stood until it was taken down, and in which previous to the re-erection no defect had been discovered. Counsel for the other contractors also submitted that the charge against them was irrelevant.

The Advocate-Depute, for the prosecution, maintained that the accident was due not merely to faults in the re-erection, but to faults in the original joiner-work. It was the duty of the second contractors to see that the work was secure work. They had the choice of two things—either to abandon the work and say they would not do it, or if they undertook it, to see that there was security for the safety of the lieges, and especially of the children attending the school. Such a fault as that complained of was not a fault for which there was civil responsibility, so much as a fault attributable to gross negligence, which was a fair subject of criminal responsibility.

The Dean of Faculty argued that the defendants were entitled to know from the indictment where the insufficiency of the workmanship was, and what it was in the building that gave way. If the charge was to be proven at all, it must be on the footing that certain specific parts of the structure gave way, and that the fault of the prisoners was the cause of it. They were entitled to something more than the statement that the shed "collapsed," which was a very curious expression. It was impossible, he held, for those employed in 1881 to so put up the building as they found it. The whole work done originally was undone. It was not suggested that they had any opportunity of inspecting the work before the other men began to re-erect it, and in the absence of such an opportunity those who originally erected the building surely could not now be held criminally responsible.

Lord Young, in giving judgment as to the question of relevancy, said:—This seems to have been a very sad accident, and it would be satisfactory upon a proper libel to have an investigation into the cause of it. But I can't say this is a proper libel. Indeed, I have hardly ever seen one like it. The case is a peculiar one undoubtedly, and a peculiarity in a case is always a fair explanation of an indictment being out of the common course. But I must say for this indictment that it is uncommonly confused. It is very difficult to pick up from a statement in one sentence that extends to eight printed pages what is exactly alleged against the prisoners individually, and to what exactly the sad accident which happened in March 1882 is attributable. No fewer than four little girls were killed and nine injured—a sad accident indeed. It happened, as I have said, on March 20, 1882. In respect of three of the prisoners, their connection with the shed ceased in 1879, and they had nothing to do with it so far as appears—had not seen it—for nearly three years before the time it fell. They erected the play-shed, which was finished in August 1879, but no part of the work which they did, or which was done under their superintendence, and which was finished in August 1879, existed in point of fact in March 1882. Their work had altogether disappeared, because the work they finished in August 1879 was—subject to an observation which I shall make immediately—taken down and removed in March 1881. The work had disappeared therefore. It may have been very bad, but it served its purpose so long as it was allowed to stand. In March 1881—not quite, but approaching two years after it was erected—it was removed. It is said that a part of the wall-plate was not removed. The indictment is not distinct upon this, and a criminal indictment ought to be very distinct upon everything on which a charge of crime may turn. It is explained that a bit of the wall-plate was not removed—that so much of the material was left standing. But, subject to that observation, all the work which the three prisoners first mentioned in the indictment did disappear in March 1881. It appears that the School Board had it in view to build an enlarged shed, but that their intention was frustrated by the objection of somebody or other, who forbade the contemplated operations. They were evidently averse to litigation, or satisfied that with justice to others their intentions could not be carried out, and so the firm of jobbing joiners they had employed to take down and remove the work of Carmichael, Service, and Andrew were employed to put it back again. They were not employed to find any new material—they were told simply to restore the building as they found it. And this they did in the month of March as jobbing joiners, doing such work as they were employed to do, and not exercising their judgment in the matter. They were told just to put things as they found them, and that they did. Now, I have to consider whether there is here a relevant charge against both or either set of prisoners. The first set of prisoners consisted of those who engaged in the original erection of the shed, and the second set consisted of the two jobbing joiners who were employed to restore the shed. Now, with respect to the first set, I cannot find any ground satisfactory to my own mind for subjecting to a criminal responsibility—which I would do by holding this indictment against them relevant—for the fall of a building those who had erected that building's predecessor. I know of no authority for such a thing. I think there is no reason for it, and therefore with respect to them I am of opinion this indictment is irrelevant. If it had been stated that they were culpable in the way of providing material for this shed, which was of a dangerous character, so that the use of it exposed human life to risk, and that the use of it had led to this accident, I should have been disposed to think that that, at least within reasonable limits with respect to time, might have been a relevant charge; but I am unable to select or excise out of this indictment a point of that kind, so that I cannot upon such a ground hold the indictment relevant with respect to the first three prisoners. With respect to the others, I repeat that they were joiners employed to take down the roof with a view to the enlargement of the shed, and to restore it as they found it—that is to say, just to replace the materials given to them in the position out of which the materials had been taken. I cannot find a relevant charge against them either. They might have so conducted themselves in the matter as to infer culpability and criminal responsibility, but I do not find it stated in this indictment that they did so. It is no doubt stated that the work as they restored it was not sufficient, or that they restored it insufficiently, but then when the indictment is examined, and when



the Advocate-Depute was interrogated by myself as to whether there was any insufficiency except in the fastenings, which he said existed in the predecessor of the roof—a facsimile of which they were asked to restore—it is not said that any such thing is suggested or intended. They were not employed to exercise their judgment in the matter. As I understand the case against them, they would have been responsible if any accident had occurred in consequence of their not replacing things as they found them, as they were told to do. They were not asked to judge of the sufficiency of the materials, or to give advice or judgment as to the supply of these. They were not under any contract to furnish materials themselves, either wall-plate or anything else. They were to take the materials furnished by the School Board and the architect, and to place them in the position in which they found them. And it is said in the indictment that this is precisely what they did do—that the accident, indeed, is attributable to their doing exactly what they were instructed to do. So I cannot find that the libel is relevant in respect to them either. I must say that in March 1881, when the roof was re-erected after it had been standing about two years or nearly so, I am surprised some one was not employed to look to the state of the materials, and to look to the sufficiency of the fastenings. But that does not seem to have been done. It just seems to have been taken for granted that everything would be right if the old materials were replaced in the position in which they had been before, and if affording a bad example to be copied in such circumstances forms a ground of criminal accusation, there would be good grounds for a criminal action against both sets of prisoners. But being of opinion that is not a good charge, I find the charge in respect of the first set of prisoners irrelevant, and, on analogous grounds which I have endeavoured to explain, I find the charge against the second set irrelevant. The result, therefore, is that I find the libel irrelevant. The prisoners were then liberated.

### ARTISANS' DWELLINGS.

THE Select Committee appointed by the House of Commons to consider the working of the Artisans' and Labourers' Dwellings Improvements Acts of 1875 and 1879 have completed their report. The Committee are of opinion that nothing will contribute more to the social, moral, and physical improvement of the working classes than the improvement of the houses and places in which they live. In carrying out such improvements they believe that there is ample room for the operation of all existing agencies—Sir Richard Cross's Acts (1875–1879), Mr. Torrens' Acts (1868–1879), the Public Health and other Sanitary and Local Acts, as well as for private enterprise.

The Committee consider that Sir Richard Cross's Acts, which require that "the improvement scheme shall provide for the accommodation of *at the least* as many persons of the working class as may be displaced," may be relaxed, and that the accommodation to be required should vary from one-half to two-thirds, as the confirming authority may think fit, on the report of the person holding the local inquiry in such case on their behalf. The effect of this relaxation will be not merely greatly to reduce the cost, but it will in many cases enable the Metropolitan Board, in dealing with an unhealthy area, to refrain from pulling down the whole number of the houses, at all events at once, in cases when they may be able to render parts of the area sufficiently healthy by pulling down certain houses only, and so letting in light and air and giving ventilation to the remaining parts.

As there is a large migration of the working classes to the suburbs, it is necessary to facilitate cheap means of locomotion, and to control the condition of the suburban houses. It is therefore recommended—1st. That similar conditions as to workmen's trains within a certain distance from London to those now imposed upon the Great Eastern Railway Company should be enforced in the case of other railways as opportunities may offer. Such an opportunity has just offered in the case of the Regent's Canal Bill. They have strongly recommended this Bill to the notice of the Board of Trade, in consequence of which proper clauses will be inserted on their suggestion. 2nd. That many of the sanitary provisions of the Metropolitan Building Acts be at once extended to the suburbs, under the control of the several local authorities. 3rd. That all existing sanitary legislation should be more fully enforced, especially in those parts of the suburbs where buildings are so rapidly springing up.

The Committee regard the provisions of Mr. Torrens' Acts as most useful, and regret that they have not been more constantly and universally put in force. They would strongly urge upon the vestries and district boards the necessity of putting them fully in force without delay.

The intention of Parliament in sanctioning these statutes was to provide the means whereby local authorities might secure the effectual repair of dilapidated dwellings, or, when necessary, their gradual reconstruction. As the work of bit-by-bit replacement can never cease to be an object of municipal care in over-peopled localities, it was hoped that it would come to be regarded as a constantly recurring duty which, if performed with discrimination, would lead to the permanent improvement and rateable capability

of a district, without aggravating in the process the evils of overcrowding.

The Committee are of opinion that these Acts may be materially improved by allowing the local authority to remove houses, though in themselves in good condition, when by doing so they could open up courts and alleys, and so give the necessary air, light, and ventilation, so as to render such courts or alleys healthy; in which case the owner would be entitled to full compensation, just as much as the owner of premises taken under the 5th section of the Act of 1875 for widening existing approaches to unhealthy areas. In such cases the Committee think that any additional value accruing in consequence to houses adjoining the house so pulled down, should, when they belong to the same owner, be taken into consideration in assessing compensation. The Committee think that the operation of these Acts should not be confined to individual premises, but should be extended to several houses in a street, court, or alley, within the limits of what may be called a mere local as opposed to a metropolitan improvement.

In conclusion, the Committee, while fully alive to the necessity of consolidating the whole of the existing Acts, and of dealing with the other matters alluded to above, are of opinion that—(1) It is desirable that a short Amending Bill of the Acts of 1875–79 should at once be brought into Parliament, and, if possible, passed this session, to carry out so much of the above recommendations as relates to relaxing the Acts in respect of the number of persons for whom accommodation should be provided in all pending or future schemes in the provincial towns as well as in London, and to the doing away with the necessity for a provisional award, and also as to the period after which no compensation should be given for alteration in term or tenure, or for improvement made. (2) It is desirable to amend the Act of 1868, and the Amending Act of 1879, as suggested, without delay. (3) It is also desirable to pass an Act for relaxing the provisions of the Metropolitan Street Improvement Act, 1877 on the points above suggested, and this also, in their opinion, ought to be brought before Parliament, and passed during the present session, and they are also of opinion that the same policy ought to be followed in any future Metropolitan Street Improvement Act. (4) The Committee hope that, if the recommendations they propose to be carried out this session obtain the sanction of Parliament, no time should be lost by the Corporation of the City, by the Metropolitan Board of Works, by the vestries, and by the District Boards of Works, in giving effect to these designs for local improvements. (5) They would recommend the alteration of the Standing Order No. 884 so as to carry out the views indicated in this report, still, however, retaining sufficient safeguards in the interests of the persons to be displaced, in accordance with the general tenor of this report.

### THE CHURCH OF ST. PETER, PETERCHURCH.

A PAPER was read by the Rev. G. M. Metcalfe on the history of Peterchurch at a late meeting of the Woolhope Field Club. He said:—Dedicated to St. Peter, it is mainly of the early Norman style, date about the tenth century. The church consists of apse, double chancel (with once, very probably, a central tower), and nave. These comprise a very unusual and complete church arrangement, and form, without doubt, a most interesting example of this period of architecture. There are two other churches in the county, and not so very far from Peterchurch, which I suppose are of about the same date. I allude to Kilpeck and Moccas; but these are much smaller, and neither of them possesses the double chancel, though there is a common touch in all three which seems to bespeak a common builder; but no other church, so far as I am aware, approaches this in simple outline and character. You will find that the work throughout is plain and massive, with walls about three feet thick. There are few mouldings, and but little ornamentation, except on the middle chancel arch and abacus of the nave archway, and on the font. Externally a little enrichment will be found introduced into the string and heads of the apse windows, and on the head of the south doorway of the nave. The proportions of the plan of the building are very pleasing. The dimensions of the nave are about 53 feet long by 26 feet 6 inches wide; the first chancel (or central tower) a square of about 21 feet, the second chancel being 19 feet by 16 feet, and the apse 17 feet 6 inches wide, struck in with a radius of about 9 feet.

The points of interest are six windows introduced into the walls of later architecture—viz., two of the first Pointed (thirteenth century), one Decorated (fourteenth century), and three Perpendicular (fifteenth century). The priest's doorway in the chancel is also first Pointed, and the nave doorways (north and south) are of the same date as the tower and spire (viz., Decorated).

Placed in front of the apse will be seen the high altar, which is of stone. The top slab is 6 feet 3 inches long by 3 feet wide and 4 inches thick, bevelled on the underside, and it is 32 inches high. On the Gospel and Epistle ends, and in the centre of this slab, there are five incised visible crosses, having reference, I presume, to the five wounds in our Lord's body. The support is of rough rubble stonework. The top stone slab had to be removed during the restoration in 1869–1870, but no relics were discovered.



Probably, then, the altar was erected where a saint's blood was shed, and the church afterwards added to enclose and protect it.

Within about two miles of the church is the ruin of a long-disused chapel adjoining Urishay Castle, and in this chapel is another stone altar precisely similar to the one I have described, and bearing also the five crosses. At Abbey Dore you will also find a stone slab for altar, but *minus* the crosses. The narrow loop-hole windows, with stone steppings, are very curious in the apse and the nave; a wooden table of oak—before the restoration—stood and was used as the Communion table before the stone altar. This is now removed, and placed in the vestry or lower part of the tower.

I remember when I was curate in charge, and before the restoration, the inner chancel or the sacristy was blocked out from view of the congregation, the key-stone of the plaster and rubble, three or four feet thick, was built, and chancel arch had dropped out, and a wall of lath filled up the whole of the archway, a small organ doorway being left in the middle; and this part of the church was only used at the time of the celebration of the Holy Communion. A stranger once helped me, and insisted upon reading the ante-communion service from the stone altar. The old clerk—a son of the Anakims—tried his utmost, from his place in the three-decker, to repeat the responses after the Commandments; but the stranger's voice in the inner chancel was only a hum—in fact, inaudible—and my old friend took off his spectacles, looked piteously round on the congregation, closed his big book with a bang, and said, "It is of no use; I canna' hear him." A decorated piscina will be found in the south wall of the nave to the east.

Over the south doorway is a coloured stone tablet of a fish, a good specimen of a trout, having a gold chain round its neck. Some consider it emblematic of the patron saint and the tribute-money miraculously procured. There is a legend of a fish of unusual dimensions having been caught by one of the churchwardens in the little river Dore, hard by, and that a plaster cast was taken and affixed in the church to commemorate the circumstance. But probably it originally was placed there as the well-known Christian emblem. In the tower are a few tablets and an old stone of some antiquity. The font of stone is very old and ancient—coeval with the period of the church—very singular in form, narrowed in the waist with a rope moulding, such as forms a beading externally round the apse, and which ornament has been cleverly used by the architect in the decoration of the stone pulpit.

Before the restoration two galleries once existed—one in the entrance to the chancel, and which only the men entered, and to which there was access by a circular staircase from the chancel in the way to the roodloft; and the other, which was removed in 1869, was at the west end of the nave, and was a rough structure used as a singing gallery. It had no mediæval interest at all, though relics might perchance once have been exhibited from it. Two other rough modern galleries were also taken down in 1869 in the nave and in the chancel on the north. During the restoration in 1869, and chiefly in the chancel, a very large quantity of human remains were found within two or three inches of the surface of the floor level. They had apparently been buried without ever being encased in coffins, and perhaps had first been hurriedly buried elsewhere. In a hole dug for a single scaffold pole I saw about a dozen skulls alone removed. All these remains were carefully buried again in the churchyard.

The old nave roof was blown down and destroyed by a dreadful storm of wind in 1869. It was of oak. At the restoration it was reproduced exactly in form and shape, but not in oak. There was a porch at the north entrance to the nave, but being in a very dilapidated state, and of no architectural interest, it was removed. The architect, Mr. Edgar Williamis, has an harmonious design ready for a new stone porch when the funds, so much desired, are forthcoming.

The spire and tower are decorated (fourteenth century) and were a short time back in a very ruinous and dangerous condition, but they are now splendidly restored, and the work most admirably carried out and accomplished without an accident. The height of the tower is 80 feet from ground; spire and vane 116 feet. Total height 196 feet. They who remember the church prior to 1869 will bear me out when I say that almost every architectural feature was as good as obliterated. So after the very pleasing result obtained through the care and genius (as yet, I grieve to say, quite unremunerated) of my friend the architect, Mr. Thomas Edgar Williams, of Victoria Street, Westminster, who has devoted much time and zealous care and skill to his work, that utterance of Mr. Ruskin, in his "Letters from Venice," does not apply—if in any, certainly not in this case:—"Of course all restoration is accursed architects' jobbery, and will go on as long as they can get their filthy bread by such business.—J. R., 1877." Some crumbs of comfort, I am sure, may fall to my friend's lot when you gentlemen pass your verdict upon his work.

The "City Press" states that the cost of reclaiming Epping Forest, including arbitration, compensation, and other legal expenses incurred by the Corporation, will approach the sum of 270,000/.

## A MANCHESTER SHIP CANAL.

A MEETING was held on Tuesday at Didsbury, for the purpose of considering a scheme by which the construction of a ship canal from Liverpool to Manchester is proposed. Among those present were the Mayors of Salford, Ashton, Warrington, Macclesfield, Stockport, Rochdale, and Staleybridge.

Mr. Fulton, C.E., described the project. He said it was proposed to straighten, widen, and deepen a portion of the rivers Mersey and Irwell, so as to provide a direct tidal channel of sufficient capacity to allow vessels of the largest draught which now navigate the Suez Canal to reach Manchester. By means of the proposed excavated channel the tide would be brought up to Manchester, and at ordinary spring tides there would be at that place a range or rise of tide from low to high water spring tides of 15 feet, and at high water neap tides 12 feet. The depth at low water at Manchester and where it was proposed to construct a basin would be 22 feet, which, added to 15 feet, the range of high water spring tides, would give a total depth at high water of 37 feet. From Manchester to the sea the minimum depth at high water spring tides would also be 37 feet, or 10 feet more than exists in the Clyde navigation up to Glasgow. At low water spring tides the minimum depth of the channel would be 22 feet, or about 12 feet more water than exists at low water on the bar in the Queen's Channel at the mouth of the Mersey, so that as soon as a vessel on the flood tide had sufficient depth to cross the bar, she would be able to reach about an hour or so later than she could obtain admission into the docks at Liverpool. With regard to the railways which would be interfered with by the proposed channel, they would have to be passed over the proposed navigation by bridges of an increased elevation, or if thought more desirable by swing bridges. The proposed basin at the Manchester terminus would be 8,000 feet long and 700 feet wide, with a depth at high water spring tides of 37 feet and 22 feet at low water, which would accommodate the largest ocean-going vessels and prevent them from grounding. The basin would consist of an area of 128½ acres. The length of quaysage would be about 16,000 lineal feet or more than three miles, and the quays would be provided with sidings, by means of which goods could, by the construction of short connecting links, be transferred to the basin lines of the existing railway companies. The great advantage of the local and central position of Manchester over Liverpool must be borne in mind. The instance of the Clyde navigation was a parallel case, where, from its pre-eminent position, Glasgow had secured nearly the whole of the trade of that important navigation. The surface of the Irwell at a point below Throstle Nest weir was 61 feet above Ordnance datum, the mean level of the sea, and, therefore, in order to allow the tide to flow to the required height, a cutting of a depth of 87 feet to the bottom of the navigation would have to be made at that point. The depth of the deepest cutting on the Suez Canal was 85 feet, and that of the proposed Panama Canal was 315 feet. It was maintained that beside the direct service of the navigation to the commerce of Manchester, it would be a certain means of preventing a recurrence of such damaging floods as those which had occurred of late years, and would occur again if this proposal was not carried out, whenever the rainfall heavy. The straightened, widened, and deepened channel would allow the free outflow of a much larger body of upland water than had ever swelled the Irwell. The descent of the floods into the new channel would be regulated by a series of weirs extending above and below Throstle Nest Weir. The interposition of these weirs would moderate the velocity of the current of the water at its entrance into the new channel, and so diminish the amount of scour which would otherwise take place. The entire length of the proposed channel from Manchester to Liverpool would be 37 miles, of which 19 miles would be excavation or deepening and 18 training. The distance along the present Mersey and Irwell navigation from Manchester to Liverpool was 40 miles; the distance along the original channel was 47 miles. From near Trafford Bridge, Salford, the eastern end of the proposed navigation to Runcorn, the Mersey, after receiving the Irwell, winds so as to make the distance by its natural course about 27 miles. By the plan of the proposed tidal channel, it was intended to use the existing river bed where it was tolerably straight, and to cut off the bends, so as to reduce the length of its course between Trafford Bridge, Salford, and Runcorn, by about nine miles. From near Trafford Bridge the proposed basin would occupy the present bed of the river as far as the commencement of the bend above Mode Wheel Mill, where the new channel would commence, and would be excavated in a nearly direct line, and a portion of the present bed would be filled in. Two smaller bends below and near Eccles would be cut off, and the existing channel used for a short distance below Barton Aqueduct. The same process of straightening would take place all the way to Runcorn, an alternate utilising of the present bed of the river and the cutting off of bends. Means would be taken to preserve the existing wharf accommodation at Warrington, with an increased depth of channel, so that vessels of a large class would be able to reach and lie afloat. Facilities also would be afforded for the construction of docks, if thought expedient. The existing river channel between Warrington and



Penketh Bar below Norton Marsh would be straightened, and where the present more expanded channel of the river was reached dredging and training of the low-water channel would commence and be continued to Runcorn. It was proposed that the navigation should, as a minimum, be 228 feet wide at the level of high water, and 80 feet at the bottom. An approximate estimate of the probable cost of this undertaking showed that it would cost 4,500,000 $\frac{1}{2}$ . This modification of the original estimate of 3,500,000 $\frac{1}{2}$  had arisen from the adoption of an enlarged area of basin at Manchester, and also an increase in the dimensions of the navigation from 12 feet at low water to 22 feet. With a view to create a discussion to elicit the opinion of those likely to be well acquainted with local requirements, and to secure the means necessary, it was proposed to make careful detailed surveys, and to explore the district by sinking shafts and making borings, in order to ascertain accurately the nature of the excavations. Owing to the large amount of unemployed capital, and to the serious dearth of employment existing throughout the country among the class of workmen usually employed on similar undertakings, the present period was considered opportune for carrying out an extensive engineering undertaking such as the one above referred to.

Mr. Hicks said the ship tonnage which entered and left Liverpool in 1881 amounted to 15,787,896, and the estimated amount of cargo was 145,000,000 tons, nearly 50 per cent. of which consisted of Manchester goods. The exports from Liverpool were 84,000,000 tons, of which 43,000,000 were Manchester goods. There were also several million tons of woollen goods coming from Yorkshire, and passing through Manchester, and also metals from Staffordshire. Very nearly four-fifths of the export trade of Liverpool came through Manchester at this moment. Then there were the imports, which amounted in value to 114,000,000 $\frac{1}{2}$ , the vast bulk of which must find their way within the triangle of which Manchester was the centre. Of the 14,000,000 tons of shipping leaving and entering Liverpool, at least 5,000,000 would use the proposed navigation, and goods would find their way to Manchester either directly in the ships or by means of local steamers. If a charge were made of 3s. per ton on that 5,000,000, they would get a revenue of 750,000 $\frac{1}{2}$  per annum; and, if a charge were also made for the vessels, they would get an additional revenue of 125,000 $\frac{1}{2}$ , which was much less than the charges made by the Mersey Docks Board. If they added to that the rents arising from the property gained in connection with the navigation that would be another 25,000 $\frac{1}{2}$ , making the gross revenue 900,000 $\frac{1}{2}$ . Allowing 15 per cent. for working expenses—which was a large estimate, the proportion in the case of the Suez Canal being only 6 per cent.—then there would be a net revenue of 765,000 $\frac{1}{2}$ . That sum would pay 10 per cent. if the undertaking cost 7,000,000 $\frac{1}{2}$ , and 5 per cent. if it cost 14,000,000 $\frac{1}{2}$ . In addition to that, it must not be forgotten that on this 5,000,000 tons there would be a saving of 4s. a ton in freight, which would amount to 1,000,000 $\frac{1}{2}$  per annum; and there would in addition be a saving of Liverpool dock dues of 214,000 $\frac{1}{2}$ , being a total saving on 5,000,000 tons of 1,250,000 $\frac{1}{2}$ .

A provisional committee was appointed to inquire into the best means of carrying out the project.

### STRAW BOARDS.

THE Legation Report on the manufactures of the United States includes the following account of the new straw lumber industry:—There can be no question that the straw lumber is admirably adapted to many kinds of finishing work, barrels, table and counter tops, fine doors, and ornamental work; and we are assured that it can be produced and sold in competition with the finer grades of pine, or in competition with wide walnut, at about one-half the price of the latter. The standard manufacture is in widths of 32 inches, a length of 12 feet, and a thickness corresponding to that of surfaced boards. These dimensions may be varied to suit such orders as may be given, and embrace any width, length, or thickness. Unlike lumber, however, narrower widths are the most costly. The straw lumber may be ripped with the hand-saw, or upon the buzz-saw; may be run through the sticker for the manufacture of mouldings, and takes a nail or screw about as well as oak. It may be finished with varnish or with paint, and is susceptible to a high polish. It is practically water and fire-proof, being manufactured under 500 degrees of heat, and we are assured has been boiled for some hours without any apparent change of structure. Its tensile strength is greater than that of walnut or oak, and its weight about one-fifth greater than the former when dry. It is made from any kind of straw, including hemp and flax fibre—in fact, from any material that will make pulp—and a ton of straw will produce 1,000 feet of boards. The pulp is rolled into thin sheets, a number of which, corresponding with the thickness of the lumber desired, are placed together with a peculiar cement, which is claimed to be waterproof, and are then rolled under a pressure sufficient to amalgamate them into a solid mass, which may be worked with a plane if desired.

When it is remembered that it takes 100 years to grow a tree to maturity, suiting it for commercial purposes, and a tree producing 32-inch lumber will require fully twice that time, while

20,000 feet per acre is a large yield under the most favourable circumstances, it will at once be realised that where 2,000 feet can be taken from an acre of ground for an indefinite number of years, the process which enables such a result to be accomplished, and which will yield a really valuable lumber, is one of vast importance. We look for valuable results in the future in the manufacture of lumber from what is practically a waste material, but which will be produced in endless quantities so long as the United States maintains its character as a grain-producing country. The factory at the time of its destruction by fire was turning out 20,000 feet per day, and had orders for 10,000,000 feet.

### SMOKE ABATEMENT EXHIBITION.

AT a meeting of the Smoke Abatement Committee, held at 44 Berners Street, Mr. Ernest Hart in the chair, jurors' reports were handed in from Colonel Festing, C.B., Professor Chandler Roberts, F.R.S., Mr. Atchison, Mr. D. Kinnear Clark, Mr. Harris, and others, on behalf of the various juries, discussing the results obtained and tabulating the figures shown by the various tests. The chairman said that the committee were greatly indebted to the eminent men who had given so much labour to this work, and who by their individual exertions and superintendence so largely added to the value of the jury reports. Great satisfaction was expressed at the excellent results which these reports show to have been achieved by some of the leading exhibits in the economy of fuel and abatement of smoke in open grates, as well as the satisfactory action of open grates and kitcheners intended for burning anthracite or smokeless coal. Great success was said to have been attained by various exhibits in showing how ordinary Newcastle coal can be burnt in open grates and ordinary kitcheners without any sensible production of smoke. The hon. secretary (Mr. W. R. E. Coles) announced that the Manchester Exhibition of Smoke-abating Apparatus, carried out partly under the auspices of this Society, had proved highly successful, and had attracted great interest among the practical men in the Lancashire district, and would, it was believed, be fruitful in good results. The arrangements were discussed for converting this committee into a permanent institution for smoke abatement, under the provisions of the law. It was announced that the Duke of Westminster would preside at a meeting to be held at Grosvenor House on Friday, July 14, for the purpose of distributing the awards, when it was expected that all the reports and tabulations would be ready in the form of a volume for public information.



### The Competition Question.

SIR,—Your leader of Saturday last constrains me, however reluctantly, to again protest against the pessimist ideas you have ventilated on this question.

To repeat the argument I formerly took would indeed be superfluous. The main point (to refresh your readers' memories) was, "names v. men"; or to give it in an ironical style, taking the Glasgow competition as a text: Why not, as you say (though even this is precluded by the "instruction"), open the envelopes, put the "big gun" in front, should he be amongst the ten, or, if not, refer back to the 115 rejected ones, hunt him out, and let him perpetuate his name to the glory of British architecture of the nineteenth century? But one may whisper, What about the author of the best design, if such an one is young and comparatively unknown? "Oh, give him his cheque for 150 $\frac{1}{2}$ , even if only about half his due as an architectural draughtsman, brains being nothing; tell him youth is a crime in architecture; that the royal road is round the corner; and in future to be careful not to try to step in front of his elder brother."

Seriously, to return to your article: the answer to all your arguments, in my opinion, is a short and conclusive one. If the selected author should, in the wisdom of the "Town Council," fall short of the necessary qualification (whatever that may mean), why not let him be employed with an architect of eminence as consultant?

Mr. Barry—the saviour of the hope of British architecture, and I use the term in all seriousness—deserves the approbation of the profession in so manfully combating the reservation clause. He knows, and his robustness is born of the fact, that it will be impossible for the merely "pretty draughtsman," "the architect to the trade," or even the "academical youngster," to stand at the head of a competition conducted by a thoroughly competent assessor. The trial is too severe for such as I have named, demanding as it does a grasp not only of architecture as a fine art, but a thorough knowledge of construction, good planning, and the other handmaids-in-waiting. In this knowledge, properly applied, an efficient architect assessor may stand invulnerable; and I take it Mr. Barry's answer implies what I have attempted to show.



Overwhelming evidence can be adduced in support of the fact that architects of eminence have, in almost all instances, crept upwards by the ladder of competition—in fact, take away competition, and where is the hope of architecture as applied to the comparatively unknown?

Who can estimate the value of competition when viewed in the light of an educating influence? What number of architects would care to carefully look into the planning of special buildings and endeavour to excel in such if no object was in view? I hold, sir, that in place of the present hopefulness of British architecture, we should gradually sink lower and lower in the art if this means of education was sapped. Your desire to ventilate this subject thoroughly is a cause for congratulation and of apology from me in further troubling you on the subject. I am, sir, J. L.

#### The Cyrene "Apollo."

SIR,—The marble head from Cyrene which Mr. Watkiss Lloyd refers to in the last number of *The Architect* was not, as he implies, placed for the first time beside the Choiseul-Gouffier *Apollo* during the recent rearrangement of some of the sculptures in the British Museum. It had, in fact, for a number of years previously stood close beside that statue in the Phigaleian Room, where it had been so placed for the purpose of comparison, and, so far as I was concerned at the time, to serve as an argument against Professor Boetticher of Berlin, who maintained, as Dr. Waldstein now maintains, that the statue represents an athlete. But the mere fact of the head having been placed so long beside the statue ought, one would think, to have led Mr. Lloyd to spare the remark that it "is rightly, if without any recognition of its real importance, inscribed *A Head of Apollo*."

I do not complain of his ignoring altogether the circumstance that this Cyrene head is engraved, and what he calls its "real importance" pointed out, in my "History of Greek Sculpture before Phœidias," p. 190, with a note on the preceding page which may interest him. Yet it is curious that Dr. Waldstein should be so severely handled for a similar omission towards Mr. Lloyd!

Yours obediently,

British Museum.

A. S. MURRAY.

#### LEGAL.

High Court of Justice.—Queen's Bench Division, Guildhall.  
June 26.

(Before Mr. Justice MANISTY.)

PARR & STRONG v. SMITH.—ARCHITECTS' FEES.

This was an action brought to recover a sum of 141*l.* for work done and services rendered by the plaintiffs to the defendant in May 1881, in preparing plans for two houses which the defendant intended to build at Gravesend. It was the second hearing of the case, the first trial, which had resulted in a verdict for the plaintiffs for the full amount, having taken place before Lord Justice Cotton and a special jury at Maidstone. (See *Architect*, February 4, 1882.) Subsequently a new trial had been ordered, on the ground that this verdict was against the weight of evidence, and also on the ground of misdirection. The defendant did not deny that he had employed the plaintiffs to prepare sketches for two houses, with stable and coach-house, similar to the house of Mr. Walker, at Gravesend; but his case was that they had agreed that the cost of the whole of the buildings should not exceed the limit of 1,200*l.* or thereabouts. The defendant's case was that the plans prepared by the plaintiffs had been useless to him, the lowest tender obtained, when they had been submitted to public tender, having amounted to as much as 2,638*l.* He paid 10*l.* 10*s.* into court in respect of their cause of action, so far as he admitted the same in his statement of defence.

At the conclusion of the case, his Lordship summed up, pointing out the greater probability of the defendant's case as to his having given the limit; and the jury, without leaving the box, returned a verdict for the defence. His Lordship thereupon gave judgment accordingly.

Supreme Court of Judicature.—Court of Appeal.—June 26.

(Sittings at Lincoln's Inn, before the LORD CHIEF JUSTICE and Lords Justices LINDLEY and BOWEN.)

STENT v. HARRISON.

This was an appeal by the defendant from the judgment of Mr. Justice Manisty in favour of the plaintiff at a trial which took place before his Lordship without a jury. The plaintiff, who is an architect at Warminster, sued for commission upon the sale of Stainsbridge House, near Malmesbury. He alleged that he had brought the property to the notice of Mr. Edward Miles, who in consequence became the purchaser at the price of 6,500*l.* The claim was for a commission at the rate of 2½ per cent. on the first 5,000*l.* and 1½ per cent. on the remaining 1,500*l.* The defendant, who is a member of the firm of Harrison, Beale & Harrison, solicitors, was sole executor of the will of Mr. George Coote, the owner. Messrs. Harrison & Co. were instructed to sell the

house. The plaintiff, in August 1875, received instructions from them to find a purchaser, Mr. Chubb, a solicitor at Malmesbury, having already received similar instructions. The house was advertised in *The Times* and other London papers, and the names of Messrs. Harrison & Co. alone appeared at the foot. Advertisements were also inserted in local papers, with the plaintiff's name subscribed. On December 17, 1875, Colonel Miles went to Chubb's office and made an application on behalf of his brother, Mr. Edward Miles, with reference to a letting of Stainsbridge House. Mr. Chubb was away from his office, and the clerk, not knowing that the particulars with regard to the house were in Mr. Chubb's possession, wrote to tell Mr. Stent that Colonel Miles had called to ask about the house. On December 18, before Stent had received Chubb's letter, Mr. Edward Miles went and looked at the house, and two days afterwards wrote to Stent that, seeing the house still advertised in the local papers, he had gone over it and wished to have particulars. Stent then wrote to Messrs. Harrison asking them to consider about letting the house. Ultimately the house was purchased in 1876. Stent had been paid for the advertisements which he had inserted, and it was contended on behalf of the appellant that no authority was given to Stent to subscribe his name to the advertisements. It was said to be the ordinary practice of house agents to advertise at their own expense, recouping themselves out of their commission.

The Lord Chief Justice said that actions like this must be very carefully watched. No doubt the work done by an agent entitling him to commission was often very slight, but if what he did was the determining point from which the purchase came to be made that was enough. It might be no more than a wave of the hand effecting an introduction, but if that brought about the purchase the agent's commission was payable. In the present case certainly very little had been done by the plaintiff. For himself, his Lordship thought he would not have come to the conclusion at which Mr. Justice Manisty had arrived, but there was one very material incident which made him think it would be wrong to reverse the judgment. It could not be denied that Mr. Miles was a witness who would naturally have no leaning in favour of either side, and, on the whole, his evidence, though it was not very satisfactory, was distinctly to the effect that Stent had brought about the purchase. If the matter had rested on the advertisements only, his Lordship would have said the defendant was entitled to succeed. Either Stent had no authority to put his name to the advertisements in the local papers, or, if he had, it was not through them that the purchase was brought about. It seemed that the application made to Chubb had wrongly been communicated to Stent by Chubb's clerk, but that was not material. If Stent did the determining act which led to the purchase, his commission was payable. His Lordship could not say that Mr. Justice Manisty was not justified in coming to the conclusion that something had passed between the plaintiff and Mr. Miles which had had the effect of bringing about the relation between Mr. Harrison and Mr. Miles which ultimately led to the purchase. He gave this judgment with reluctance, as he had personally a strong prejudice against these claims—a prejudice which he hoped was not unfounded. He must reluctantly affirm the judgment appealed against.

Lords Justices Lindley and Bowen concurred.

#### CHURCH BUILDINGS AND RESTORATION.

**Easton.**—It is proposed to complete the restoration of Little Easton Church, which has been going on for some time, by the addition of an oak screen dividing the chancel from the Maynard chapel, and fitting up the chancel with oak stalls. The restoration commenced three years ago, and additional accommodation was obtained by taking down the old vestry on the north side and building a north aisle. The nave roof was renewed in oak, similar in character to the chancel roof. The western gallery over the porch was removed, and the fine Norman arch opened to view. The Maynard chapel has been restored, and a new oak roof put in. The exterior walls are faced with flint rubble, and the windows at the east and west ends are restored and filled in with glazing. The work has been carried out under the direction of Mr. J. Clarke, of Stratford Place, diocesan architect, and the builders were Messrs. W. Bell & Sons, of Saffron Walden.

**Sal.**—The foundation-stone of the new church of St. Paul's, Sale, Cheshire, is to be laid to-day (Saturday) by Mr. W. Cunliffe Brooks, M.P. The structure is Early English in style, designed by Mr. Henry R. Price, architect, of Manchester, and will consist of nave, side aisles, and chancel, with tower and spire, and will contain 750 sittings. The cost of the building, exclusive of tower and spire, will be 4,500*l.*

**Devon.**—The new church of St. John, Ivybridge, has been opened. The building consists of nave, north and south aisles, chancel, organ chamber, south porch, and tower at the west end of the north aisle. The tower and north aisle, however, have yet to be built, and the arcade on the north side is temporarily built up. The building is in the Early Pointed style, carried out in local red dunstone and granite, and Bath and Portland stone dressings. Messrs. Finch & Son, Plymouth, are the builders, and Messrs. Hine & Odgers the architects.



**Chester.**—The Welsh church at Chester has been reopened after works of restoration carried out by Mr. Thomas Brown, builder, of Chester, from the designs of Mr. John Douglas, architect. The church, as reconstructed in 1721, was in the Queen Anne style as to its exterior. The work of restoration has included the taking down of the old north wall and extending the church by a new aisle, an arcade of timber dividing it from the nave.

**Bridgwater.**—St. Joseph's new Catholic church in Binford Place, Bridgwater, was opened on Thursday. The church consists of a sanctuary or chancel, nave, aisle, side chapel, porch, organ-gallery, and sacristy. It is built of brick, with Bath stone dressings, and covered with Bridgwater tiles, from the designs and under the superintendence of the Rev. A. J. C. Scoles, the priest at present in Bridgwater. Early Decorated was the style chosen, which necessitated a simple form of construction, the beauty of which consists in its proportion and general outline. The nave has three double lancet windows, the chancel having a clerestory. The façade to the river is imposing, with its three well-proportioned windows, relieved by columns and moulded arches. The wall between the chancel and nave is surmounted by a turret, containing the "Sanctus" bell. The chancel is divided into two bays, and lighted by four clerestory windows, whilst the east end has three windows filled with stained glass to the memory of one of the sons of Mr. York, its donor. In the north aisle a stained-glass window, representing the death of St. Joseph, has been erected by the Rev. A. J. C. Scoles in memory of his late father, the windows being the workmanship of Messrs. Lavers, Westlake & Burraud, of London. Mr. J. Kitch, of Bridgwater, is the builder; Messrs. Bradfield & Sons, of Bridgwater, the masons; and Mr. A. B. Wall, of Cheltenham, has executed the carving and canopies.

### SCHOOL BUILDINGS.

**Newcastle.**—Part of the establishment known as the Tyne Brewery, in Bath Lane, is being adapted for the purpose of a Catholic Grammar School. The brewery, with its offices, out-buildings, and yard occupied about an acre and a half of ground, and about one-third of it has been bought. The offices of the brewery will be used as the school itself, and are being converted into classrooms and schoolrooms. A second storey will be added for dormitories. The principal schoolroom will be 53 feet in length by 30 feet in breadth. The alterations to the buildings are being made from designs by Messrs. Dunn & Hansom, architects, Eldon Square, and the work is being done by Mr. Wm. Fogg, contractor, Villa Place.

### NEW BUILDINGS.

**Richmond, Yorkshire.**—Lady Zetland a few years ago opened an experimental coffee tavern in the ancient town of Richmond, which proved so successful that the Earl of Zetland determined to erect a new and enlarged building on an excellent site near the market-place. This has now been completed, and it was opened to the public a short time ago. Messrs. Oliver & Leeson, Newcastle-on-Tyne, were the architects.

### ART WORKMANSHIP.

**Sculpture.**—A new reredos has recently been put up in Great Bealings Church, Suffolk, as a memorial to the late Lord Hatherley. It is of Bath stone divided into three compartments, with alabaster shafts and richly-carved canopies, from designs prepared by Mr. Wm. Basset Smith, of 10 John Street, Adelphi, London, and executed by Messrs. Cornish & Gaymer, of North Walsham, Norfolk.

**Reredos.**—The chancel of the new church of St. Mary, Windermere, is about to be enriched by the addition of a reredos. The design is Early English in style, and the body of the work will be wrought in polished alabaster. The central portion is divided into five panels, with moulded and carved canopies, supported on green marble pillars. Four of the panels will be filled with representations of the Evangelists, in pure white alabaster; and in the central panel a carved cross of the same material will be placed upon a diaper background, relieved with a slight charging of pale gold. The work has been entrusted to Mr. Roddis.

**Jubilee Window.**—The University of Durham has this week celebrated its Jubilee, and in connection with the celebration a stained-glass window has been placed in the Great Hall. The window has been designed by Mr. C. Hodgson Fowler, of Durham, and executed by Mr. C. E. Kempe. It consists of four lights, with three principal tracery compartments. The greater part of the window is occupied by shields bearing the arms of bishops and others associated with the Castle and University, with a background of thickly-matted foliage in grey and pale green glass. Intertwined among the foliage, and between the shields, &c., are many scrolls, bearing the University motto, "Fundamenta eius super montibus sanctis." The lowest portions of the four lights are occupied by figures bearing large square fringed banners, and standing on flowery turf. Along a band at the bottom of all runs the inscription, "Universitatis hujusce jam L annos fundatæ memorem hanc fenestram alumnis posuervit MDccclxxii." The figures represent the prominent historical and ecclesiastical personages connected with the ancient City of Durham.

### GENERAL.

**Mr. T. G. Jackson, M.A.**, architect of the New Schools, Oxford, has been elected an Honorary Fellow of Wadham College.

**Mr. J. B. McCallum**, Borough Surveyor of Stafford, has been appointed Borough Surveyor of Blackburn, at a salary of 500*l.* per annum. There were seventy-three applicants for the appointment.

**Mr. Harris**, ex-Bailie of Dundee, has handed over to the town of Dundee the 30,000*l.* he promised to give for the benefit of higher education. This sum is divided into two portions, and 10,000*l.* is to be applied to the erection of a school, which it has been resolved by the School Board to name the Harris Institute, for the higher education of children connected with the public schools.

**Mr. J. H. E. Partington** has been commissioned by the Professors of Owens College to paint a presentation portrait of Dr. J. G. Greenwood, Vice-Chancellor of the Victoria University.

**Mr. W. Glover**, of Newcastle-on-Tyne, has been commissioned to prepare plans and obtain tenders for the erection of the buildings required for the Marine Exhibition at Tynemouth.

**Mr. J. Piers St. Aubyn** has prepared plans for repairs and restoration of St. Michael's Church, Helston.

**M. Gustave Doré** has purchased a building site at the corner of Parc Monceau, Paris, for 584,625 fr.

**The Paris Salon**, which closed last week, has had since May 269,933 paying and 295,000 free admissions. The aggregate receipts are 386,000 fr., and a surplus of 200,000 fr. is expected.

**The Bristol and Gloucestershire Archaeological Society** will hold its meeting this year at Stow-on-the-Wold on July 25, 26, and 27.

**The Sales** of pictures at the Cambrian Academy of Art Exhibition, Llandudno, have realised 500*l.* during the first week.

**The Kirkcaldy Fine Art Association** held its annual meeting last week under the presidency of Mr. John Sang, C.E. Office-bearers and committee were appointed for the year, the Earl of Elgin being elected President. The exhibition will be opened on September 4. The sales of works disposed of since the formation of the Association amount to nearly 10,000*l.*

**A Monument**, designed by the late Mr. G. E. Street, R.A., has been placed in the east aisle of the south transept of York Minster as a memorial of the late Dean of York, Dr. Duncombe.

**M. Jadin**, who has been called the French Landseer, has just died at the age of 77. The death of the French painter, Biard, in his eighty-fourth year, is also announced.

**The Lerwick Harbour Trustees** have negotiated a loan of 15,000*l.*, and are now about to proceed with the construction of a pier and other improvements at the harbour.

**Designs** for a new town hall at Pathhead have been submitted in competition by Mr. Raeburn, Edinburgh; Messrs. Anderson & Browne, Edinburgh; and Messrs. Campbell Douglas & Sellars, Glasgow.

**The Crystal Palace Authorities** have decided to continue the lighting of the terrace throughout the coming summer months by the André system of electric lighting, and have sanctioned the extension of this system over the track of the electric railway which is about to be opened in the grounds.

**The Indian Government** intend to proceed with the project for building a large central station in Calcutta for the use of all the railways converging there.

**The Dover Town Council** have given their support in favour of an application to be made by the Dover Harbour Board and the railway companies for leave to apply during the present Session of Parliament for a private bill to construct a deep-sea harbour.

**The Bishop of Exeter**, at the luncheon at Ivybridge on occasion of the opening of the new church of St. John, on Tuesday, said, that amongst all the things one could do it was difficult to find any more truly useful than a beautiful church, and that when people wanted to cut everything down to the standard of mere utility he would venture to say that, measured even by that standard—if only we would understand by utility that which cultivated the highest and best faculties—there was hardly anything that was more really useful in the highest sense than bestowing upon them a beautiful building in which they could take pride and pleasure, and which they could associate with their religious feelings.

**A Stained-glass Window** has been placed in Ledbury Church, as a memorial of the late Mr. Thomas Webb, banker. It was designed by Mr. W. H. J. Westlake, F.S.A.

**University College, London.**—The prizes obtained in the classes were presented on Wednesday. Among others were the following:—Slade Fine Arts Scholarships (50*l.* per annum for three years); Sarah C. Harrison, of London; Harrington Man, of London. Architecture (construction), Donaldson Silver Medal, C. M. Shiner, of London. Fine Art, painting from life (prize of 10*l.* and silver medal), C. Holroyd, of Leeds. Fine Art Anatomy, F. W. Bourdillon, of Tunbridge Wells.



# The Architect.

## THE PROPOSED NEW GOVERNMENT OFFICES.



OW long it is to be ere nations learn the art of war no more, is a question which seems to be as far as ever from a solution ; but at any rate there is no doubt that the pressure of military and naval affairs in these days of ours increases rather than diminishes in Pall Mall and Whitehall, and the Government is therefore under the necessity of building in some convenient spot new offices on an enlarged scale for the accommodation of the business of the War Department and the Admiralty. The project is at present in the preliminary stage of parliamentary enquiry, and with reference as yet only to the acquisition of a site ; but two incidents have occurred which will be of interest to our readers, namely, first, that the authorities of the Office of Public Works have made public a map showing the proposed position, extent, and block plan of the buildings ; and secondly, that the Council of the Institute of Architects has seen fit to deliver a protest or condemnatory manifesto thereon. We ought perhaps to add that, thirdly, this proceeding has not been very respectfully received.

The block plan is a very simple one. The area which extends in frontage from the Horse Guards in Whitehall to Messrs. COX & BIDDULPH'S Bank in Charing Cross, and in depth from the street line to the ground occupied by St. James's Park, together with the supplementary portions lying between Spring Gardens and the Park, in all about four acres of land, is made to accommodate almost exclusively one great group of building, with a façade about 440 feet in length along the street, and a general depth of about 420 feet between the street and the park.\* This edifice is divided arbitrarily, without interfering with its symmetries, into two unequal parts : the War Office taking the southward division next the Horse Guards, and the Admiralty taking the northward division. Five interior quadrangles are suggested for light, and the result externally is a plan, somewhat irregularly disposed to suit the shape of the site, but still quite symmetrical ; the Horse Guards parade, that is to say, is preserved intact in the rear of the reduced depth of the extreme south wing, whilst at the north the mass facing the Park runs behind the house of Messrs. COX & BIDDULPH, and yet the disposition of the several façades is classically systematic. Lastly, as regards the ground behind Spring Gardens, the westward portion of it is appropriated to an official residence, with a piece of garden attached facing westwards on the offices of the Metropolitan Board of Works, and the eastward portion is chiefly devoted to the formation of a new roadway, nearly 60 feet in average width, leading from King CHARLES'S statue to the Mall in the Park ; another piece of garden being left to face that of the official residence on the other side of this road. Incidentally, the well-known narrow footway which passes into the Park by the Metropolitan Board Office is enlarged into a second public entrance, 40 feet wide, and the width of the old street called Spring Gardens is increased to about 60 feet. It will be at once seen that liberal dimensions pervade the scheme throughout, and the eye of an architect will be able to discern also a great deal of unaffected ingenuity and good sense in every part of it. Looking at the plan, therefore, dispassionately (and why should any one do otherwise ?) it has all the appearance architecturally of being a good and grand one ; and we may venture to say there is no sign of its having been as yet carried any further into development than it professes to go ; the design of the building, in other words, has yet to be made, and there is evidently plenty of scope for the skill of an experienced artist, or, it may be, for that of a hundred ambitious competitors. Indeed, we note the announcement in the newspapers that public competition is to be resorted to.

It is not the custom in this country for the Government to take steps in a preparatory way for sounding the professional architectural world upon a great public undertaking of any

kind. We think this is to be regretted ; because, after all, although Parliament is no doubt the only legitimate exponent of the most experienced public opinion in all that concerns business and common sense, yet the "Royal Institute of British Architects," if at all worthy of the name, ought to be regarded as the equally legitimate exponent of the most experienced public opinion upon all questions of architectural skill. The value of what is called an "officious" or unrecognised semi-official opinion upon any very important project, obtained privately from a body of experts in the particular profession interested, and arrived at carefully in the interest of the cause, cannot well be overrated. We admit that it is essential in such a case that the profession in question should be so represented personally as to command the confidence of the Government ; but we have no reason to suppose that the Institute of Architects, as at present developed, would not in some form or other, if properly called upon, answer to this condition to the full.

Whether the Council of the Institute (whose composition and policy just now must no doubt be acknowledged to be the subject of a little dissatisfaction) has gone to work in the case before us in precisely the best way, we must leave our readers to judge ; but what has been done may be described in very few words. We have said that the Government plan proposes to form a good new roadway, or rather two, from Charing Cross into the Park. Neither of these lines of thoroughfare can be said to lie exactly on any existing axis ; but, accepting the general style of London thoroughfares, which seem to have a chronic objection to perfectly direct lines, these new thoroughfares are not by any means wanting in good points. However, what the Institute Council has done is simply to demand, reason or none, a continuation of the Mall into Charing Cross, at a width of over 100 feet. The axis would still not be that of the Mall, or even that of the Strand ; but it curves from the one to the other, and takes the statue of the stubborn king centrally ; and so far so well. It has to be remembered, however, that there are two opinions about the propriety of the long-discussed idea of "opening the Mall into Charing Cross," and that many good authorities, indeed, object to it *in limine*. What they contend for is—conceding the point as to the thoroughfare being desirable in some form—that it ought to be, not a flaring avenue proceeding out of the Park into the town at a rush, but a more private and in a manner almost secluded "Gate" leading from the town quietly into the Park ; and that this is simply the view which the advisers of the Government have now adopted is all that need be said—except that it is not at all unlikely the public at large may be found to prefer it.

We do not presume to dictate to the Council of the Institute, and we prefer to suppose that the Council scarcely wishes to dictate thoughtlessly to the Government, or to Parliament, or to the public ; but if we were to invite the profession unreservedly to support the line of criticism which is adopted in the "letter ordered to be addressed to the First Commissioner of H.M. Works and Public Buildings" by the Institute Secretaries, this would be more than we can conscientiously do. If it were a fair question, we should like to ask who composed the document ; but at any rate it runs thus : "Without more particular information" the Secretaries are instructed to do themselves the honour of informing Mr. SHAW-LEFEVRE that "it is impossible to assert that the proposed site is not sufficient" for the mere accommodation required ; but the block plan and the "inadequate and cramped quadrangles" nevertheless "convey the impression" that it is "inadequate for the purpose." Secondly, it is magnificently declared that the "opening up" of the Mall in the grand style—or pseudo-grand—"ought to be an indispensable feature of the scheme," and not a syllable of argument or of explanation is wasted upon this point. Thirdly, the whole of the remaining buildings between the proposed site and Trafalgar Square, including COX & BIDDULPH'S Bank, DRUMMOND'S Bank, the Sun Fire Office, and the Union Bank, besides many private houses, ought peremptorily and at all hazards to be simply swept away. Why ? "By avoiding such properties," says the letter sarcastically, "the scheme may commend itself on the score of economy ; but to locate important public offices in the background is a scheme which from all other points of view would appear to court condemnation." The language is almost less felicitous than the logic, but the idea would seem to be that, if the Government would carry on the frontage of the new buildings round the corner, and all the

\* May we without offence suggest that a plan issued by the Institute to its members ought to have a scale attached ?



way to DENT the watchmaker's, it would be a great deal longer, which is no doubt perfectly true. As for the new buildings as now proposed being "in the background" and "shut in by property of an inferior character," we can only say that it is not easy to identify the description through phrases so obscure. The protest from beginning to end is querulous, unconsidered, and, we very much fear, will be called foolish.

The Secretaries are "further instructed to add" that the President of the Institute (possibly wearing his chain of office) would be happy to attend the Parliamentary Committee and give such further explanations as may be desired. It is scarcely necessary to remark that the Committee did *not* ask Mr. HORACE JONES to attend them. The impression left upon the minds of a select group of the gentlemen of the House of Commons by a letter of this character would probably not be such as to induce them to ask for more; and Messrs. MACVICAR ANDERSON & WHITE have "had the honour to be the obedient servants" of Mr. SHAW LEFEVRE for nothing, as Professor DONALDSON, for instance, or any one else who has been accustomed to deal with public men in similar cases, might have told them beforehand.

How would it answer if the Institute were to appoint what is called a "Parliamentary Committee," formed of men carefully chosen for the task of transacting public business on behalf of the profession? The fiasco now before us is surely enough to teach the Council a lesson. Nothing short of the best judgment expressed in the most cogent language is worthy of the high ground on which such business must be transacted if it is to be done at all. That the Institute had an opportunity here of making a hit must be plain to any one; that the mark has been missed is plainer still. The designers of the block plan are to be congratulated upon the form in which they have submitted to Parliament and the public a very stately project; and we will only add the hope that the advisers of the Government in respect of the proposed competition of architects which is to follow may be able to devise such conditions—and they will bear a great deal of devising—as shall spare the nation, for once at least, from a repetition of the blundering which for the last fifty years has made almost every attempt to obtain a fit design for a great public building in England more unsuccessful in one way or another than all that have gone before.

### THE STORY OF MYRRHA: GIORGIONE OR TITIAN?

**A**MONG the pictures happily secured for the nation from the Duke of HAMILTON'S sale is one in most perfect preservation, and of such admirable beauty that the price paid for it of 1,700*l.* is relatively to be esteemed most moderate. This is not half the price paid for the vast Botticelli—national money, again, not ill laid out—but it has brought the nation double the money's worth in the best qualities of fine art as distinct from archæology. The picture is that of which the subject is given as *The Story of Myrrha*. This title seems at first enigmatical, but is justified on closer attention to details. The ascription to GIORGIONE seems somewhat more difficult of acceptance. Have we among the few absolutely authenticated works of this master any examples which justify us in confidently recognising in this beautiful picture a clear identity of style and execution? If this cannot be very positively affirmed, one is disposed to claim the picture for TITIAN, always supposing, again, that it is possible for his execution of so admirable and important a picture to have escaped record as coming from his hand. The transparent glow of the flesh tints is suggestive of his marvellously significant picture, for those who have the key to the enigma, of *Sacred and Profane Love*, in the Borghese palace at Rome; and the foliage of the trees in the centre seems in harmony with that of the lost *Peter Martyr*. Some details in the background—a significant pair of rabbits, and the management of smaller groups of figures—agree in intention or treatment with the Borghese picture. The questionable drawing of a leg does not impugn the inference; there seems something wrong in the setting on of the leg of the nude figure in the Borghese, and it can be paralleled among the troop of followers in the *Bacchus and Ariadne* of the National Gallery; and the somewhat sturdy proportions of the chief female figure reproduce the type of the nymph with the cymbals, and even of ARIADNE herself. The landscape background, especially in the remote distance, recalls back-

grounds of TITIAN. In any case, the picture is a triumph of Venetian colour. Those who can be content to appreciate a picture on its merits and love it for its own sake, may be glad to remit the discussion as to authorship to the cognoscenti, who, in their controversies on this point, are usually only interested in such merits in quite a secondary degree. It is in the background of the picture that the unpleasant story of MYRRHA is told in a series of detached incidents, mercifully reduced by distance. The main group embodies the sequel of a story which had to be indicated, but which all are glad should be rendered not more distinctly than as a vague reminiscence. The painter seems to have sought for no other authority beyond OVID in the tenth book of the "Metamorphoses," unless perhaps he also took one secondary hint from OVID'S summarist LACTANTIUS. This writer supplies what OVID seems to have casually omitted in its natural place—the suggestion of offended pride which provoked VENUS to inspire MYRRHA with a passion for her father CINYRAS. In the picture we see the goddess aloft in the sky, apparently occupied in giving the commission to her son CUPID. Below, we can discern in the distance MYRRHA flying from her father, who pursues her, indignant at the deception which she had practised upon him ("Met." x. 476); then we see her on her knees, in the act of supplicating the gods for some punishment that may remove her equally from the living and the dead (v. 486). Her prayer was granted by her transformation into the myrrh-tree, which bore her name; at the extreme right of the picture we see her in remote distance still, with arms upraised and branching forth with leaves, her body, as a tree-trunk, rooting below (v. 490). From the rent trunk a group of nymphs, the Naidæ, receive the strangely-born infant.

This infant grew, so the tale ran on in the Latin form of a Hellenised Oriental mythus, to be the beautiful ADONIS, for whom VENUS, wounded casually by her son's arrow as she embraced him, conceived so infatuated a passion as in some degree to avenge his mother MYRRHA (v. 524). Such is the only notice OVID gives of an act of malice on the part of the goddess originally that called for such revenge. Quite unsuspecting of the effect upon her of the scratch by her son's arrow, she prefers ADONIS to the skies, and is for ever in company with him. In the succinct costume of DIANA, uncovered to the knee, she delights herself with him in the shade, or takes part in the chase of least formidable game. She dissuades him from exposing himself to dangerous encounters with boars or lions, and woos him to take rest in the poplar shade. In the poem, thus, as in the picture, there is no hint of the customary recusant coyness of ADONIS. The painter has placed not far off the same amatory symbol that is introduced in the Borghese picture—a pair of white rabbits. The conclusion of the story of ADONIS—who hunted once too often a creature too ferocious and died by the boar's tusk—seems to be indicated in the background at the left of the picture. A female figure in distress beside an outstretched corpse; by another more remote there is an obscure suggestion of a boar. Another female figure is introduced, separately occupied with an object which is not easily identified or explained. It looks like an escutcheon. Was it that of the patron?

In harmony of colouring, in glow of flesh tints, in transparency of shadow, and beauty of landscape and ultimate general unity of effect, this painting is worthy of a central place among the very best for which subjects have been furnished by Ovidian mythology.

When, therefore, we look into the unquestionable subject of the picture we have, to accept the pair of lovers—the really central and predominant group—as VENUS and ADONIS. Who would have been so bold as to claim these titles for them independently? Some boldness is required in any case; Dr. WAAGEN indeed flinched, and claimed the lovers as HIPPOmenes and ATALANTA, whose story OVID links on very inartificially to that of MYRRHA and ADONIS; he wanted it told, and employs VENUS to relate in detail how they were transformed into lions, to introduce a warning to her lover not to provoke wild beasts. There is indeed as little of the goddess about the VENUS as there is of the huntsman about ADONIS. It would seem as if the painter was minded to express the sentiment that the very nature of the Queen of Love and Beauty, the malicious inspirer of deceptive allurements and enticing affectations, was transformed into something of confiding simplicity when she herself was the victim of a delusion to which she made it her ordinary business to subject so many an innocent. She exhibits here as little of the tantalising coquettishness of



the Medicæan VENUS as of the self-confidence in the beauty which is one of the main forces of nature at large, that gives dignity to her of Melos. So let it most welcomingly be; and we may congratulate the painter and ourselves if he was moved to treat a subject that could scarcely be of his own choosing for its own sake, in such a manner that we are at liberty, if we wisely are so pleased, to look upon his work as representing a mere romantic love-encounter well within the limits poetically allowable for the old Saturnian times. Even so it is carried into a region somewhat remote from closer sympathies; of heart and soul in any elevated and elevating human sense the picture has none whatever. We gaze upon it with ever-increasing delight; it detains and interests the eye the more the longer we stand before it; but therein lies the charm exclusively—that new harmonies of tone and tint rise up spontaneously to surprise us as the regard travels by “many a winding bout” from one detail of the scene to another; we find ourselves for the time, and willingly, under the conduct of a magician who holds the keys of some of Nature’s secrets most potent to give pleasure, and of which he exults to exhibit his absolute command.

Certainly we may ask ourselves, in the absence of worthy interest in the subject, what does all this come to? Is not the enjoyment somewhat too Venetian? Is it not rather of the quality of the gloriousness of the Doge’s palace, the full enjoyment of which is dependent on forgetting that the festivity is divided only by a party wall or a vaulted floor from the cramped cells in the basement or the half width of the Bridge of Sighs filled not more surely with criminals than with the victims of the criminal tyranny that is flaunting in gorgeous robes among the masterpieces of TITIAN, GIORGIONE, and TINTORETTO? It is apt indeed and consistent that the glory of Venetian art should be concentrated in colour, to the distinct subordination, if not the suppression, of the more definite exposition of sentiment—tender or profound. Venice in her glory, in the prosperity which had such marvellous duration, was made up of a combination of political vigour in the administrators and political abasement in the governed; of gaiety and splendour ministered to by all the arts and a seething mass of indescribable social corruption below. As BROWNING says:—

What! they lived then thus at Venice?  
Some with lives that came to nothing, some with deeds as well  
Undone,  
Death came tacitly and took them where they never see the sun.

As for Venice and its people, merely born to bloom and drop,  
Here on earth they bore their fruitage, mirth and folly were the crop.

What of soul was left, I wonder, when the kissing had to stop?  
Dust and ashes.

Nay! something more. Among the dust and ashes at the bottom of the crucible in which revolutionary Time has calcined so much that was justly perishable, there are beads of precious metal, and these are saved for the world in the memorials of Venetian art—not least in the triumphs of Venetian colour. Colour simply, independently of subject and special characteristics, is on a par with instrumental music, and who shall disparage the moral value of the greatest musical creations. And if, as in the picture which is our theme, colour achieves one of its grandest triumphs in association with an unworthy collateral subject, it is much the same whether that subject be chosen by an Italian cardinal of the sixteenth century from a classical repertory, or a burgomaster is content if TENIERS presents him with the group of a drivelling old boor venturing to get a kiss from a frow in a washhouse. The boor and his servant in one instance and VENUS and ADONIS in the other are indifferent accidents. Nature’s truth and Nature’s dignity are asserted with her beauty independently in demonstrations of the exquisite and elevated delight derivable from the tones and tints in which the world is arrayed. The last harmony and the best is wanting of course when elements of repulsiveness are unhappily presented in combination with beautiful effects that in themselves are faultless; but the combination is not inextricable. Memory happily has a selective power of which the purely beautiful has full benefit, and imagination, exalted by contemplation of what is of unrivalled beauty in a GIORGIONE or a TENIERS, is even thereby enabled and incited to soar to elevations at which all that is repulsive in mythology as all that is mean in commonplace existence are equally and happily lost to sight.

## MENZEL’S ILLUSTRATIONS TO THE WORKS OF FREDERICK THE GREAT.\*

THE reputé gained by Herr ADOLF MENZEL as the greatest illustrator of the day is not likely to be otherwise than heightened by the volumes the French edition of which lies before us. The scheme of the work generally was planned by King FREDERICK WILLIAM IV. as a homage to the memory of his illustrious ancestor. Professor PREUSS, Royal Historiographer of Brandenburg, was entrusted with the collection of the literary remains of the great FREDERICK—his poems, letters, essays, orders, &c.—and MENZEL was commissioned to furnish 200 pertinent illustrations on wood. The book was printed by Court-printer DECKER, and published in thirty sumptuous quartos, a limited number only being issued for presents or deposit in the royal libraries. MENZEL’S designs were engraved by Herrn UNZELMANN, H. MÜLLER, ALBERT and OTTO VOGEL, whose woodcuts were justly accepted by the artist as perfectly satisfactory reproductions—a judgment which the general public has now the opportunity of endorsing. The present Emperor may be said to do the distinguished Prussian artist, whom Berlin delights to honour, an act of justice in the permission given to the publisher, Herr WAGNER, to issue in Germany and France a limited edition, of 300 copies in all, of the collected illustrations, printed afresh from the original blocks, under the superintendence of Professor O. VOGEL, one of the original band of engravers. These designs have been for the public, practically unattainable heretofore, but now can at any rate be studied in the chief art libraries of Europe. The text by Herr PIETSCH prefixes to each vignette the title of the literary performance illustrated, and gives a few words as to the especial point selected by the artist, and his manner of throwing it into artistic shape. The name of the engraver is also given in each case. A straightforward preface and good indexes make the publication complete.

ADOLF MENZEL was rather more than six years over the designs. He had an immense deal in the way of preparation to do: manuscripts to examine, historical data to look out, old prints to consult, museums and collections to visit; correct portraiture, correct costume, and truth in all narrative details, compelled such time-consuming research. The actual work upon the blocks, even the invention of the designs, would, with an artist so sure-handed and so ready, take but a portion of the whole period. Other men would have evaded all the accuracy to which MENZEL bound himself; but not only was he under surveillance to do dutifully the Royal commission, his own spirit also was eager in its fulfilment, and his own style—which, as he says himself, is comprehended in “the round word ‘naturalism’”—implied a certain close veracity and historic completeness. A large proportion of these illustrations are portraits of the famous or infamous men and women with whom FREDERICK had to do, and these are taken from reliable sources, and are no mere fancy affairs called up out of nothing. They are, however, not slavish copies, but treated with reference to the particular incident or mood indicated in the context. It must be allowed, however, that in these vignetted portraits the very fidelity with which MENZEL has re-echoed, so to speak, the effigies found in contemporary graphic records has also checked his individuality, and it is only here and there that a special finesse and vigour marks the heads as drawn by a modern master of character.

In the rough the four volumes are divided into—I. Illustrations of historic incidents; II. of philosophic writings; III. of satiric and complimentary verses, and intimate letters; IV. of instructions and miscellaneous correspondence. If one thing more than another could prove the inventiveness of a designer, it is the power to embody the meaning or find a suggestion for graphic representation in the literary material here set forth for illustration. The merest thread of subject matter is seized hold of and cleverly magnified and adorned; or, reading between the lines, the artist finds suggestions in a suggestion, and creates a fresh thought out of the most unlikely material. Both the shortcomings and the strength of MENZEL’S art become evident in these designs. In aiming at the fanciful and the graceful, he is sometimes deplorable, often ridiculous; his classical gods and goddesses are inane and stilted; his allegorical designs are, when ambitious, strained or

\* “Illustrations des Œuvres de Frédéric-le-Grand.” Par Adolphe Menzel. Gravées sur bois par O. Vogel, A. Vogel, F. Unzelmann et H. Müller. 200 Feuilletts avec texte de L. Pietsch. Berlin, 1882. R. Wagner, éditeur.



trivial ; but, on the contrary, when he embodies in analogy, after the manner of emblems, his designs are compact and vigorous. Take, for example, the illustration to the letter on "Human Wishes": a bird-cage through which a branch of fruited cherry is thrust ; the feathered prisoner in the cage, heedless of the berries, beats against the bars to find freedom, while the wild bird outside is as vainly striving to force its way into the cage to get at the fruit bunches. The apt completeness of the thought here is only equalled by the clear mastery of the design. Or, again, take the emblem symbolising the coalition of France and Austria against Prussia, by the claws of ravenous birds clutching into the globe over which hovers the crowned eagle of Prussia ; or, once more, the vigilance of Prussia watching for her opportunity to attack the Austrian enemy, embodied in the lithe form of a lion, mane bristling, tail a-flourish, which courses around the Austrian elephant, standing vigilant but immovable in the centre, with trunk laid to the ground. This is an excellent example of MENZEL'S wonderfully crisp vigour of line and power of apposite expression.

It is not a little amusing that the keen satire of the artist, which plays often at the expense of the hero he has been called upon to glorify, should have escaped censure from his patrons. He has commented upon one of FREDERICK'S grandiloquent discourses to crowned heads on the duties of sovereigns by representing the hero with his back to us rising from his chair in an oratorical frenzy, regarded from either side by the Empresses MARIA THERESA, and CATHERINE with mocking surprise ; while his royal hearers are for the most part snoring in their easy chairs in the shadowy background. When the King addresses complimentary epistles to the Countess CHATELET, the artist represents the poor lady as a sentimental owl, perched on a tripod, inhaling incense. FREDERICK'S formal rules of instruction to his officers are cleverly commented upon by scenes in which they would be useless or impossible ; the lamed cavalry officer with his lamed horse finds himself in no case to carry out the royal advice, and the officers who are commanded to keep the infantry on the march from stopping to drink water by the wayside are shown by MENZEL in vain struggles to restrain the thirst of a parched battalion who are plying the buckets of a draw-well. One of the neatest comments of the illustrator upon his royal author is the admirable design to illustrate FREDERICK'S diatribe upon MACHIAVELLI : a portrait of the Italian satirist is nailed to a pillory with the date of the king's refutation of "The Prince" scrawled below, but the artist signifies the change in public opinion by crowning the effigy with bay and laurel, and affixing the date, 1848, which reversed the censure of FREDERICK. The expression of superb indifference thrown into the pictured head of MACHIAVELLI is a good example of MENZEL'S drawing of character. In the fourth volume is another instance in a study of VOLTAIRE lying under funeral trappings and wreaths, with the old mocking smile still contorting the dead upturned face.

We have alluded to the failure of MENZEL to be impressive when dealing with classical allusions. His admirers say that he is simply laughing in his sleeve at the affectations of the modern classicists ; this, however, does not wholly excuse the absurdity of, for example, his winged Victory who announces the triumphs of FREDERICK to the Dowager Mother, an old dame in flounce and cap, reposing amid her invalid cushions. The apposition of the figures is in the worst style, and throughout the whole of this series of designs we do not find a single instance in which the classic myths are used otherwise than feebly, or with grotesque vulgarity. As an instance of the last, take ÆSCULAPIUS, his serpent-twined staff thrown down, struggling with ATROPAS for her fatal scissors, which the old hag, though dragged from her seat along the floor, still stoutly clutches. The fact is that MENZEL'S style is founded entirely upon study of common actual human nature. The Greek ideal of the nude form is naught to him, but he will draw a naked prize-fighter or a brawny peasant with magnificent energy. His *Venus* is a German frau without clothes, or else a mere lifeless puppet. His *Germania* watching the storm-clouds rave about the crag on which she sits throned is a buxom actress. The strength of the artist is in the real and the human ; his sure hand will render for us the slightest and subtlest line which expresses pathetic or combative or humorous emotions of the individual, natural, human, kind ; but ideal grace or nobility, or even the selected beauty which comes nearest to typical excellence, these are beyond and out-

side his strivings. The same lack is apparent in his decorative designs ; he has really no understanding of ornament ; his forms are *rococo* or simply naturalistic ; and it is only his abundant invention and drollery and sense of relative line and apportionment of space which make his famous title-pages and borders admirable art as well as significant fancy.

From these strictures, which the extravagant idolatry expended upon MENZEL in some quarters arouses one to make, we turn willingly to full admiration of the artist in his own *genre*, and for his more technical excellences. His line is unimpeachable for energy and expression ; his style ignores no fact in nature—it does not translate but reproduce. As Mr. HERKOMER points out, MENZEL takes account of colour, tone, texture, accident : in this wholly differing from the early designers for woodcut, who interpreted and symbolised. The truth and finesse of his realism and the dramatic quality of his narrative power are equally amazing ; his capacity for expressing space, and the relation of objects in perspective value, is not surpassed. He depicts animals with the knowledge of a zoologist, and human beings with the insight of a philosopher. The finest designs in the volumes before us deal with incidents of the battle-field, the camp, or the court, and the same remark was true of the illustrations to the "Life of Frederick the Great." One design, however, we will name as an example of the more profound pathos to which MENZEL occasionally lends his pencil. In vol. ii. he illustrates the Ode on Firmness by the figure of GALILEO in prison, who finds his chain too short to permit him to reach with the rusty nail he holds in his hand the bare space of wall yet unscrawled by his mathematical problems. The attitude and expression with which the philosopher turns to regard the hindering fetters, the simplicity and yet completeness with which the whole scene is brought before one, reveal that higher kind of imagination which belongs to the poetic artist.

It only remains to speak of the admirable quality of the engravings in the volumes before us. The work has been pretty equally assigned to the four artists : HERR UNZELMANN undertook fifty-one cuts ; HERMANN MÜLLER, twenty-nine ; ALBERT VOGEL, forty-six ; OTHO VOGEL, fifty-five ; and nineteen were jointly cut by MÜLLER and UNZELMANN. Finer and cleaner execution it were difficult to find ; now and then a certain poverty of effect is due to the delicate unshaded pencil-point work of the artist, which has simply been followed accurately in depth and delicacy. The blacks in the cuts of A. VOGEL and UNZELMANN are excellent in variety, and the graduation of tone and intricacy of lines reproduced in some of the more complicated engravings are of the finest direct work ever executed. The spirit, the spontaneous fling of MENZEL'S touch while at his best, has taxed successfully the responsive skill of his engravers.

## THE ART OF THE BLACKSMITH.\*

By G. H. BIRCH, A.R.I.B.A.

IT is not the intention of the present paper to endeavour to trace the actual working of iron from primæval times, from those remote ages when the ever busy and inventive mind of man first conceived the idea of separating the metal from the ore, and impressing upon the shapeless mass those forms of offence or defence, or of domestic use, which occasion required or fancy dictated. Legends, both sacred and profane, point retrospectively, the former to a "Tubal Cain," and the latter to four successive ages of gold and silver, brass and iron. Inquiry stops on the very edge of that vague and dim horizon of countless ages, nor would it be profitable to unravel myths or legends, or to indulge in speculations upon a subject so unfathomable. Abundant evidence is forthcoming not only of its use in the weapons, utensils, and tools of remote times, but also of its use in decorative art ; unfortunately, unlike bronze, which can resist the destructive influences of climate and moisture, iron—whether in the more tempered form of steel or in its own original state—readily oxidises, and leaves but little trace of its actual substance behind, so that relics of very great antiquity are but few and far between. It remains for our age to call in science, and protect by a lately-discovered process the works of art in this metal, and to transmit them uninjured to future ages.

In the retrospective history of the blacksmith's art no period was richer in inventive fancy than that period of the so-called Middle Ages. England, France, Italy, and more especially Germany, vied with each other in producing perfect wonders of art. The anvil and the hammer were ever at work, and the glow of the forge with its stream of upward sparks seemed to impart,

\* A paper read at the special visit of the Architectural Association to Messrs. Gardner's, West Strand.



Prometheus-like, life and energy to the inert mass of metal submitted to its fierce heat. Nowhere at any period were the technicalities of iron so thoroughly understood, and under the stalwart arm of the smith brought to such perfection, both of form and workmanship, as in Europe during this period of the Middle Ages.

The common articles of domestic use shared the influence of art alike with the more costly work destined for the service of religion; the homely gridiron and pothook could compare with the elaborate hinge of the church door or the grille which screened the tomb or chapel; the very nail head was a thing of beauty.

Of articles for domestic use of a very early period handed down to our times we have but few specimens, and this can easily be accounted for: the ordinary wear and tear and frequent change of proprietorship and fashion, in addition to the intrinsic value of the metal, contributed to their disappearance. "New lamps for old ones," is a ceaseless, unchanging cry from age to age. In ecclesiastical metal-work of course the specimens are more numerous and more perfectly preserved; their connection with the sacred edifices which they adorned and strengthened proved their salvation.

Without going very minutely into the subject of arms and armour, it is absolutely necessary to refer briefly to the use of iron in that most important element, in the protection of the human form, before the introduction of more deadly weapons in the art of slaying rendered such protection useless. In the Homeric age such coverings seem to have been of the most elaborate and highly wrought character, for, although Achilles may be purely an hypothetical personage, Homer in describing his armour probably only described such as was actually in use in his own day, and may have only slightly enriched it with his own poetic fancy. From the paintings on vases we know that sometimes rings of metal were used sewn on to a tunic of leather. They may have been bronze, but there is also every reason to believe that they sometimes were of iron. Polybius asserts that the Roman soldiers wore chain-mail, which is sometimes described as "*mollis lorica catena*," and we find innumerable instances on sculptured slabs of this use, and in London, amongst some Roman remains discovered in Eastcheap and Moor Lane, actual specimens of this ringed armour occurred, in which the rings did not interlace as in later specimens, but were welded together at the edge. From this time there is authentic evidence of its constant use. The Anglo-Saxons wore it, as it is frequently described in manuscripts of this period. Later on, the Bayeux tapestry represents it beyond the shadow of a doubt, both in the manner as before described and also in scales overlapping one another; while the helmet of a conical shape, with a straight bar in front to protect the nose, is also very accurately figured.

What we call chain-mail proper did not appear before Stephen's reign, and its introduction followed closely after the first Crusade, and was doubtless derived from the East, where the art of working in metals had long been known and practised. The very term "mail" means hammered, and from Stephen's time until that of Edward III. it was universally used; but long before the last-mentioned period many improvements suggested by a practical experience had modified the complete coat of chain-mail. Little by little small plates of iron fastened by straps and buckles to the chain-mail, to give additional safety to exposed portions of the person, gradually changed the appearance, and developed at last into complete plate armour, such as is familiar to us by the many monumental brasses and effigies still extant; the chain-mail being only used as a sort of fringe to the helmet, covering the neck, and as an apron, until even this disappeared, although it was nearly the end of the sixteenth century—so far as Europe is concerned—before the chain-mail finally vanished.\* After this date armour became more elaborately decorated by other processes besides those of the armourers' or smiths' inventive genius. Damascening, gilding, and painting were extensively employed, and more especially engraving or chasing; and the collections at the Tower—and more particularly the rich collection formed by her Imperial Majesty the ex-Empress of the French at Pierrefonds, now at the Hotel des Invalides—show us to what a wonderful extent this ornamentation of armour could be carried. The seventeenth and eighteenth centuries still gave employment to the smith, until the utter inability of such a protection against the deadly bullet rendered its further use ridiculous, and in these days it only appears in England in a modified form of a cuirass in the showy but splendid uniform of the Horse and Life Guards,† or occasionally in the Lord Mayor's Show, when the knights of old are represented by circus supernumeraries, as unlike these ancient prototypes as the tin armour in which they are uncomfortably encased resembles the ancient. With the armour the weapons used by its wearers have been handed down to our times, and magnificent specimens they are of an art which, although it may not be entirely dead among us in these days, is certainly dormant as far as this branch of it is concerned. The massive sword of the early mediæval period, which depended on its own intrinsic weight and admirably-tempered edge rather than on its ornamentation; the maces, battle-axes, halberds, and paltises, show a gradual increase of beauty and finish in their

workmanship. The sword and dagger hilts became more and more elaborate, especially in Germany, where the blade of the sword is often of the most eccentric form and pattern, as if it was intended more to strike terror by its appearance than by its actual application. Many of the ancient sword-hilts preserved in England, at the Musée d'Artillerie in Paris, and at Madrid, Vienna, Dresden, and Turin, are of the most marvellous beauty and workmanship that it is possible to conceive, more particularly those of the sixteenth century. Italy and France vied with each other in producing these art treasures of the craft of the smith; Milan, Turin, and Toledo were the principal seats of this industry, and in Augsburg, in Germany, there lived and died generations of men who were perfect masters in this art of the smith. The decadence with regard to the weapon was as marked as that of the armour; the handle of the sword became more and more enriched with the productions of the goldsmith and lapidary's art, until the swords became rather fitted to dangle as gilded appendages against the embroidered clocks of the silken stockings of the courtier, than to clang with martial sound against the steel-encased limbs of the warrior.

It would be beyond the limits of the present paper to enumerate the many examples of ancient work in weapons and armour contained in the public museums of Europe, and also in private collections. Armour is only mentioned here to give an idea of the extent to which the art of working in iron was carried, of the perfection it attained, and how thoroughly the capabilities of metal were understood, noting well that the casting of the metal into moulds was scarcely ever practised, that it was entirely the work of the hammer and the anvil, that the different pieces were welded and riveted by manual labour of the smith, and then subsequently finished in the same manner by the various processes of engraving, chasing, and punching.

The next division of the subject is the use of iron in ecclesiastical art, and this comprises hinges of doors, locks and fastenings, grilles, screens, railings, and vases.

We have already seen to what perfection it could be brought in defending man against his fellow man; its nobler employment in the service of his Maker remains to be considered.

The church door first engages our attention, the framing of the door requiring additional strength beyond the ordinary mortising, dovetailing, and tenoning of the wood, and this additional strength was imparted by the use of iron, and so completely was this attained that we have only to turn to numerous examples, still existing, to prove the manner in which it was done and the form it took. The hinge was usually constructed in the following manner:—A strong hook was built into the wall with forked ends well built into the masonry; on this hook was hung the hinge, which for the convenience of the illustration we will consider as simply a plain strap or flat bar of wrought iron, its ornamentation being a matter of after-consideration; this strap had at one end a hollow tube or ring of metal which fitted on to the hook, allowing the hinge to turn; the strap on the outside of the door was longer than the one on the inside, with sufficient space between the two to allow for the framing of the door and its outside planking, and the back and front straps were united by bolts, nails, or rivets, which passed through the thickness of the wood, and firmly secured all, the form of the opening in the masonry preventing, when once the door was firmly fastened by a lock or bolt, its being forced up from the hooks on which it hung. Allusion has been made to the planking, which invariably covered the framing; beside the security of the strap this planking was also fastened to the frame by nail heads and scrolls of metal, sometimes covering the whole of the outside of the door with very beautiful designs; in most cases the scrolls started from the plain strap, but sometimes they were separate. This was the usual construction, irrespective of century, which prevailed in England. On the Continent, especially in Italy, at Verona and Rome and other places, the exteriors of doors were entirely covered with plaques of bronze. A survival of the ancient classic times, that of Saint Zeno, Verona, is one of the most remarkable, and is probably of Eastern work. Although of bronze, and beyond the limits of the present paper, allusion is made to it in consequence of some of the ornamentation and nail-heads, reminding one of the earliest specimens of Norman or twelfth-century metal in England and France.

It would be difficult to decide which is really the earliest specimen of an iron hinge in this country. Barfreston Church in Kent has some early ironwork on the doors, and the cathedrals of Durham, and Ripon, and St. Albans. It would be hazardous to say that this last-mentioned specimen is absolutely Norman, although generally accounted as such; it is more probably twelfth-century. It occurs on the door leading from the south transept into the "Slype," the said door having two elaborate scroll hinges, more quaint than beautiful, the scrolls being closely set, and the foliage very stiff, the edges of the leaves being cut into a continuous chevron with a stiff curl at the termination; the main part of the band or strap, before it branches out into the scrolls and foliage, being indented with a deep line in the centre. From this the section slopes on each side, on which are engraved deeply a zigzag pattern whose point-meet forms a sort of lozenge, the sections of the scrolls and foliage being flat and engraved with a single chevron. The whole of the hinge is studded with small quatre-

\* Still used in Tartary, China, Japan, and Hindustan.

† The use of the Cuirass is preserved in French and German Armies.



foil-headed nails at regular distances, stopping the chevron pattern. On the band from which the foliage springs there is a peculiarly formed raised projection like an animal's head, slightly resembling a grille at Westminster Abbey, to which reference will be made: the hinge is either a rude copy of a thirteenth-century one, or it may be a prototype of the later and richer work of the next era. On the north door of Durham Cathedral nave there is a very fine specimen of a knocker, called the "sanctuary" knocker, of a lion or cat looking with erect ears, and surrounded by a stiff conventional mane, from which the head projects considerably; and from the mouth, which is well garnished with sharp teeth, depends a ring, the upper part of which is flattened, and at the junction of the circular and flat part on each side is the head of an animal, from whose open mouth the flat part proceeds. It is a wonderfully spirited composition with an immense deal of character about it, the deep lines proceeding from the nose to the two corners of the mouth reminding one of some of the Assyrian work. The eyes project and are pierced; it is supposed that they were filled at the back with some sort of vitreous paste, but of this there is no proof. This grim knocker played a very important part in early times, for Durham Cathedral possessed the privilege of "sanctuary," and many a poor hunted fugitive must have frantically seized the knocker and woke the echoes of Durham's holy shade, and brought by its startling summons the two Benedictine monks who kept watch and ward by day and night in the chambers above the porch, and at once admitted him into the sacred precinct, and, taking down the hurried tale in the presence of witnesses, passed him to the chambers kept ready prepared in the western towers, where for the space of thirty-nine days he was safe from pursuit, and was bound to be helped beyond seas, out of the reach of danger. The peculiarity attaching to this Durham knocker must be the excuse for this digression. Examples of these sort of knockers, although not necessarily "sanctuary" ones, are by no means uncommon. Beautiful examples exist at the collegiate church of St. Elizabeth, Marburg, at the cathedral of Erfurt in Germany, and at the church of St. Julian, Brionde, in Auvergne, France. The Erfurt example is just as grim a monster as the Durham one; the mane in each case is very similar, but it has the additional attraction of the figure of a man between its formidable teeth, the head and fore part of the body, with uplifted arms, projecting from the mouth; but the ring is plain, and it has an additional twisted cable rim encircling the mane.\* Farringdon Church, Berks, possesses a very beautiful specimen of early metal-work in the hinges on one of its doors, very much richer in detail than the St. Albans example, a photograph of which is shown. Roughly speaking, there are two hinges of not quite similar design, with floriated scrolls and a very rich band or strap between them, floriated at each end, and at the apex a curious perpendicular bar terminating at the lower end in the head of an animal, and at the upper with scrolls fitting to the shape of the arch; the whole of the hinges, bands, and scrolls are thickly studded with nails and grotesque heads and beaten ornaments. The church has been restored; the stone carving, which is of early thirteenth-century character, is entirely modern, and therefore misleading, and must not be taken as the date of the door with its metal-work.

At Staplehurst Church, Kent, there was formerly on one of the doors a very characteristic Norman hinge, of a very early type; but this church has also undergone restoration, and a friend, to whom we are indebted for the photograph of the Farringdon example states that this hinge was not there at his last visit; but in general form it resembled one at Edstaston Church, Shropshire, which retains its original hinges on the north and south doors of the nave. There are many other examples scattered about England, but all these Norman or twelfth-century hinges follow more or less the same idea—a broad strap terminating in scrolls, and whose end next the stonework is intersected by another broad strap forming nearly two-thirds of a circle, with scrolls at the ends; and between the two hinges by which the door is actually hung, there is one or more flat bands, also floriated, the ironwork protecting the whole surface of the woodwork, but not so completely as in the next era.

In France the work was, like the architecture, a little more advanced. Foliage was more extensively used, the scrolls generally finished with a well-moulded leaf or rosette; but the form of the scrolls is still stiff and lacks the graceful flow of the thirteenth century.

Some of the best specimens are preserved at the cathedrals of Angers, Le Puy, Noyeau, Paris, and many others, especially at the Abbey of St. Denis.†

\* Durham Cathedral, on the south door of the nave, has some fine ironwork hinges of rather heavy design, and ornamental work of three interlaced lozenges, the centre one having an open quatrefoil; from which proceeds, like the four arms of a cross, elaborate scroll foliage, the whole composition reminding one of some of the work in the twelfth-century illuminations.

† Notre Dame de Paris preserves its original ironwork on the two lateral western porches: that on the north-west is called *Porte de la Vierge*, and on the south-west *Porte de Ste. Anne*. The centre western doorway is entirely modern. According to local traditions, the blacksmith who forged the work on the two first-mentioned doors was no less a personage than the Devil himself, making the usual contract with the workman for

In addition to the metal-work on the doors, in many of the large churches in France of the twelfth century, the large wheel windows are filled with ornamental iron grilles. Noyeau has a noted example. These grilles were more particularly used when there was no tracery, the ramifications of the iron-work almost supplying the want of it. Viollet le Duc in his *Dictionnaire Raisonné* gives a very beautiful example of this. The grilles referred to are not the iron frames in which the twelfth and thirteenth century stained glass is contained, as at Canterbury, Bourges, and Chartres, and in innumerable other instances; but were designed especially to fill these large circular openings, and the effect is very beautiful.

(To be continued.)

## THE BRITISH MUSEUM.

ACCORDING to the returns in the annual report, the number of persons admitted to view the general collections was last year 764,405, while in the year before it was 655,688. In some of the special collections there was also an increase. This is to be explained by the greater number of hours during which the museums are open.

The transference of the natural history collections to South Kensington has not been continued during the year 1881. The department of zoology, which still remains at Bloomsbury, is of an extent fully equal to the united departments of geology, mineralogy, and botany, which were removed in the year 1880, and it is a work of time to provide the new cases required for the specimens. It is considered unadvisable to move any part of the zoological collections until the whole of these fittings are prepared. Rapid progress is being made with them, and it is hoped the galleries may be completely furnished and made ready to receive the bulk of the collections by the autumn of the present year. But for one important portion of them—the specimens preserved in spirit—a distinct building separated from the main edifice has yet to be erected, and it is doubtful whether this can be effected before the setting in of the winter. These specimens are so essential a part of other collections that to separate them by leaving them at Bloomsbury, after removal of the general department, would be to render it impossible to make use of either portion for scientific study. It is doubtful, therefore, whether the removal of the zoological collections can be effected before the spring of 1883.

During the year 28,284 volumes were added to the Library, including 8,622 received in pursuance of the law of copyright. Among the additions to the manuscripts are sixteen volumes of illuminated Bibles, Psalters, Hours of the Virgin, of the thirteenth-fifteenth centuries, bequeathed by the late William Burges, A.R.A.; the Guild-book of the Barber-surgeons of the city of York, commenced in the fifteenth century, and containing drawings of that period and a series of coloured portraits of English sovereigns from Henry VII. to Elizabeth, by different hands of the sixteenth century, continued by later additions down to George III.; final concord relating to property in Stratford-on-Avon, and elsewhere, formerly belonging to William Shakespeare; genealogical and heraldic collections of James Torre, of Snidall, *ob.* 1699, relating chiefly to Yorkshire and the northern counties of England—seventeenth century; "Analecta Eboracensia," collections relating to the city of York, by Sir Thomas Widdrington, Recorder of York, *ob.* 1674.

The keeper of the Department of Prints and Drawings reports that a descriptive catalogue has been prepared by Mr. R. Fisher of the Early Italian prints, nielli, and sulphur casts in the Department, which have been temporarily rearranged for the purpose. This collection of the works of the painter-engravers who flourished in Italy before the establishment of a school of professional engravers by Marc Antonio, greatly exceeds in value and comprehensiveness every other of its kind in Europe. The following purchases have been made: Italian school, 136 examples; German school, 495 examples; Dutch and Flemish schools, 81 examples; French school, 1,396 examples; and English school, 1,380 examples. Among the last are an extremely curious and interesting view of the baths at Bath, with the buildings round them, as they appeared in the reign of Charles II., showing people bathing and others looking on, drawn in pen and Indian ink by T. Johnson, an artist of the period who is mentioned in Walpole's "Anecdotes"; two large volumes of chalk drawings from the human figure and the Elgin Marbles, by Benjamin Robert Haydon, the historical painter; a volume of drawings, chiefly from paintings in the catacombs at Rome, executed by Thomas Heaphy to illustrate his work "The Likeness of Christ"; a whole-length portrait of John, Duke of Marlborough, in pen and Indian ink, on brown paper, by Michael Dahl, with Horace Walpole's autograph; and two marine views, drawn in water colours by Augustus Hervey, Earl of Bristol.

his soul after death. The name this demoniacal workman went by was "Biscornette," alluding to his horns, he thereby hoping to effectually block the doors to prevent the egress of the Blessed Sacrament. Tradition further says that he never succeeded with regard to the central doorway, and the fact of the south-western door being never opened was looked upon as a proof of this. The Devil in the Middle Ages seemed particularly partial to blacksmiths, as witness St. Dunstan and his legends.



One of the additions to the Assyrian collection is a slab of grey stone about 1 foot high by 9 inches wide, found at Abou-habba in an earthenware coffer. Abou-habba, the site of the ancient Sipara, was a city of considerable importance in ancient times, and was the special seat of the worship of Samas, the sun-god. Close to the Sipara of Samas was another town called Sipara of Anunit, the seat of the goddess Anunit, and it is thought that this twofold Sipara gave rise to the dual Sepharvaim of the Old Testament. Sipara of Samas was specially celebrated as being the town of books or tablets. This stone contains a long inscription in six columns, and, at the top of the obverse, a representation in low relief of a shrine in which the sun-god is shown sitting. Above the shrine are two small figures, who seem to be guiding with cords the course of the sun, which stands on a kind of table below them. Servants of the sun-god lead into his presence a worshipper who is most likely the king Nabû-abla-iddin, by whose order the stone was cut. The workmanship of the whole is very fine and in perfect condition. The inscription, which covers the rest of the obverse and the whole of the reverse, begins by mentioning the wrongdoings of the Sutû, an invading tribe, who seem to have carried off the property of the temple of the sun-god (called E-barra) at Sipara, and destroyed the sanctuaries, in the time of Simmas-Sikhu. The restoration of the temple, begun by Simmas-Sikhu, was continued during the reign of Ê-Ulbar-sakin-sumi, and ended by Nabû-abla-iddin, the king who had the slab carved. A long description is given of the repair of and additions to the shrine and temple, and the founding of a shrine for the sun-god in Bit-kar-zagina beside the Euphrates, where victims were offered, and honey and wine bestowed. The inscription speaks also of the services of the temple called Ê-barra. The slab is dated at Babylon, the 20th of Nisan, in the 31st year of Nabû-abla-iddin, king of Babylon. During the course of years the stone got broken, and was riveted together with iron, most likely in the time of Nabopalassar, who made the earthen coffer in which to keep it, and an inscribed covering to protect the bas-relief.

The Department of Greek and Roman Antiquities has acquired among other examples a fictile kylix, on the inside of which are represented Athenê and Hephaestos making Pandora, the names of all three figures being inscribed on the vase. The hair and draperies are painted in brown and purple with gilt accessories; the flesh is drawn in fine lines on the white background. The drawing of these figures, though slightly archaic, is very masterly, the colours harmoniously blended, and the condition of the vase excellent. This exquisite specimen of ancient fictile art was found in 1828 at Nola in Campania. Polychrome designs of this kind, on a white ground, are of extreme rarity.

The Department of British and Mediæval Antiquities has been enriched by the specimens selected from the collection of the late William Burges, including a number of objects of great value to the Museum, and chiefly of a class ill-represented. Among the miscellaneous objects may be noticed a Roman glass bottle with a gold rim; two Byzantine gold earrings, one of them with enamelled birds; a crystal spoon set in silver gilt; a cinque-cento ring enamelled; six tablets carved in ivory, chiefly of the fourteenth century; five caskets of early date, one of them Italian, carved in bone with the history of Jason; four specimens of Saracenic metal work, two of them writing-boxes of the fourteenth century, inlaid with gold and silver; and a Chinese bronze stand, also inlaid with gold and silver. The most extensive portion of the bequest consists of armour, and especially of helmets. The series of European helmets selected is twenty in number, commencing with a bascinet of the middle of the fourteenth century; and several of them formed part of the Meyrick collection. Among other examples of armour may be noticed a half-suit believed to have belonged to a king of Poland, and a half-suit of scale armour; two very fine engraved breast-plates, and specimens of the secret armour known as Jazerine and Brigandine. In the Oriental section are some fine helmets; a shirt of mail with passages from the Koran; some curious Tatar helmets and gauntlets; and an old Japanese suit. The whole number of specimens comprised in Mr. Burges' bequest is one hundred and seventy.

#### EXHIBITION OF ANCIENT IRONWORK.

A VISIT by invitation was paid by members of the Architectural Association on Saturday afternoon last to the premises of Messrs. Gardner, West Strand, to inspect a loan collection of ancient wrought-iron work. After the inspection of the collection a paper on "The Art of the Blacksmith" was read by Mr. G. H. Birch, A.R.I.B.A., Hon. Secretary of the London and Middlesex Society, which appears in another part of the paper. On conclusion of the reading, votes of thanks were, on the proposition of Mr. E. C. Robins, F.S.A., and seconded by Mr. Nash, unanimously passed to the author of the paper, as also to Messrs. Gardner and the various owners of the works lent for exhibition.

The examples of works are numerous, and may fairly be said to have been representative of the works of the smith for several centuries. Messrs. Gardner undertook the great labour of collecting specimens and organising the exhibition as an experiment. Heretofore wrought-iron work has not been properly represented in

exhibitions, and the reason is obvious. Ornamental ironwork generally forms a part of a building, and can be removed with difficulty. It happens consequently that while the work of enamellers, embroiderers, potters, and goldsmiths is familiar to visitors to museums, little is known about smiths' work, unless when it is represented by arms and armour. Messrs. Gardner's exhibition is intended to be indicative of what is possessed by collectors in this country, and thus to prepare the way for an exhibition on a larger scale under the auspices of the Ironfounders' Company.

Among the earliest examples are some Roman keys. They are not particularly artistic, but they are interesting as showing the extent to which iron was worked in those days. Coming to later work, there are specimens of wrought chain-mail of the thirteenth century, interesting as showing two different methods of working the links. Belonging to the fourteenth and fifteenth centuries are fine examples of treasure caskets; and hinges of German work, showing the rigidity of line which is still peculiar to the German craftsman; also German and Flemish hingework of the sixteenth century on carved panelling of aumbrey doors, a period when it was the fashion to cover the wood profusely with hingework. The increased fineness of execution in work of the later dates is noticeable in a remarkable Renaissance casket of delicate *repoussé* workmanship. The outer sides exhibit figures in niches or canopies; subsidiary panels below also containing figures. Between the canopies are pilasters, which carry the entablature, the architectural design representing a temple, the various parts being jointed and fitted together with marvellous perfection; the top of the lid is surmounted by a recumbent figure in solid metal. The casket, however, appears only to have been lent for the special occasion on Saturday. Rivalling this in beauty of execution is a master-key for keeping other keys under lock, which is said to have belonged to Mary Queen of Scots, and has been lent by Mr. Truefitt. The ornament could hardly be more delicate if the material were lace. Conspicuous in the handle are finely-wrought initials, and a little inspection reveals a carefully-designed thistle. Two quaintly-worked keys date respectively from the time of Edward IV. and the French King Louis. A remarkable *repoussé* copy of the picture after Vandyke, representing the children of Charles I., and which probably was English work, was valued at 400*l.* A curious specimen of German work is seen in a bracket, intended probably to hold a sign; and there is a quaint bracket, a lift for font cover, from St. Michael's, Queenhythe. A pendant for a chandelier from St. Catherine Cree is said to have been designed by Inigo Jones. There are several examples of grilles. A French work, of the date of Francis I., in which the reticulations are formed into *fleurs-de-lys*, is of marvellous beauty. A grille of flat Venetian work is worthy of notice, examples of this class being unknown here. A Florentine balcony of the seventeenth century shows a fine specimen of interlacing work. Among the interior fittings deserving of attention are a piece of Italian staircase and handrail work, fireplace furniture with cressets for holding charcoal, hooks for suspending pots, taken probably from a guardroom, fire-irons, dogs, &c., exhibiting much elegance of design. A pair of fire-dogs of Venetian workmanship are adorned with a profusion of flowers cut out in the metal; the effect is curious if not quite satisfactory as far as fitness of purpose goes. A wrought-iron chest of elaborate execution occupies a prominent position, the property once of some royal personage doubtless, from the crown upon it. Near it are two oak travelling chests of massive proportions, one marked with a cardinal's seal; the woodwork is largely covered with ornamental bands and scrolls. There are several examples of the art of the armourer; among them is a sixteenth-century stiletto with punctures in the blade to carry poison. It may be described as a fluted or a four-edged weapon, the edges, moreover, being slightly turned over. The addition of poison to such a murderous-looking implement seems almost like carrying coals to Newcastle. An Elizabethan dagger with priming pan is probably unique, though perhaps not uncommon at that period. In the collection of rapiers the ornamentation of the hilts is worthy of inspection. A double candleholder with shade, besides showing merit of its own, is interesting as having belonged to William Hogarth. A Nuremberg door-knocker representing the arms of Austria, among elaborate examples of these articles, is shown. The bare reproduction of such work of art in these days would scarcely be possible. It is lent by Mr. Alfred Newman (Messrs. Gardner's representative), to whose energy is largely due the success of the exhibition. Also lent by Mr. Newman are a specimen of a Queen Anne bracket, the richness of the work in which is altogether unique, and a "swag" of the utmost delicacy of execution. Besides Mr. George Truefitt, other architects have made valuable loans, among them may be mentioned Messrs. Bodley & Garner, who have sent some examples of hingework; Mr. Shoppee, whose collection is of great value; Mr. Pritchett, treasure-caskets, &c.

In closing a hasty comment on a few of the objects in a collection which appears to cover the whole range of the work of the smith, attention may be drawn to the modern work produced by the firm, the design and execution of which accord well with the spirit of the old work.



## NOTES AND COMMENTS.

MR. CHARLES HEATH WILSON, the artist, died on Monday last in Florence, where he resided for several years. He was at one time master of the Glasgow School of Art, and some of the lectures he delivered to the students, and which have been published, may still be read with interest. It was partly through Mr. WILSON's exertions that the numerous windows in the Cathedral were filled with stained glass. While in Florence he entered on an investigation of the documents relating to MICHAEL ANGELO, and produced the excellent biography which has been published by Mr. JOHN MURRAY. Mr. WILSON lately co-operated with Mr. R. P. PULLAN in preparing a design for the decoration of the dome of St. Paul's. His services to Italian art were rewarded by his enrolment among the Knights of the Crown of Italy.

DURING the discussion in the French Senate on the vote of 2,000*l.* for pulling down and removing the ruins of the Tuileries, already passed by the Chamber, M. JULES FERRY, the Minister of Education and Fine Arts, made an important declaration. In reply to the objections of M. WALLON, who urged that the present tendency of the Republican Government appeared to be to destroy all relics of past *régimes* without putting anything in their place, M. FERRY remarked that in the opinion of the Government, when once the demolition was complete, the necessity of replacing the Palace by some other building would become evident to everyone. It was proposed, he said, to erect on the site a building for the reception of works by modern masters, thus relieving the Luxembourg, which is overcrowded with paintings, and at the same time forming a fit pendant to the neighbouring Louvre Museum.

THE students at South Kensington who are ambitious to become art masters appear to be degenerating. Very few of them are able to pass the examination that is requisite in order to gain a certificate. In 1881 there were twenty-eight candidates examined, and only six passed in outline drawing, eight in model drawing, and thirteen in ornament; or, in other words, about two-thirds of the drawings were ineligible, and we believe not one full certificate was awarded. Some of the rejected aspirants went up again for examination lately, and in the same subjects. Out of nearly forty students only three were competent to pass in outline drawing, eleven were successful in model drawing, and five in ornament. The defeat becomes more remarkable when it is known that some of the students have heretofore officiated as teachers, and that others have obtained prizes for the art subjects in which they failed at South Kensington. The duty of the authorities becomes clear under the circumstances. There may be remonstrances and explanations from the friends of the students, but we trust that they will not have the effect of lowering the standard set up by the examiners.

Two architects of eminence have died during the week. Mr. JOSEPH ALOYSIUS HANSOM gained a position fifty years ago by his design for the Town Hall in Birmingham, which at the time was considered a remarkable work. He undertook the erection of the building, and, as commonly happens when architects and engineers become contractors, with no profit to himself. While in Birmingham Mr. HANSOM invented the cab which has been called the gondola of London. Soon afterwards many churches and convents were erected by Roman Catholics, and several of them were entrusted to him. Two of his largest buildings are the church of the Holy Name at Manchester and St. Philip's Church at Arundel, which might serve for a cathedral. Mr. GEORGE SOMERS CLARKE, who died on Tuesday last, designed some important works. Among them are the Seamen's Orphan Asylum at Snaresbrook, the Credit and Discount Company's offices in the City, the splendid mansion of the late Mr. HERMON at Wyfold Court, and the Turkish baths in Jermyn Street.

THE International Exhibition of the Union Centrale des Arts Décoratifs, to be opened next month at the Palais de l'Industrie, is now being rapidly organised. All the best known names of Parisian and French art fabrication are already inscribed among the exhibitors.

M. JULES FERRY has authorised the managing body of the Mobilier National to organise, in connection with the foregoing, a subsidiary Exhibition of the furniture, hangings, &c., contained in French public buildings, presenting any artistic or historical interest. Several large rooms will be arranged in this way, each one being fitted up in a different style, from the Louis XIV. down to that prevailing at the beginning of the present century. It has further been arranged with the various Ministers that the Union Centrale shall have at its disposition for purposes of this Exhibition the antique furniture, fittings, &c., in which the various Government offices and buildings are so rich, on condition that any articles removed shall be replaced for the time being by ordinary furniture at the expense of the Union.

A NEW system of electric lighting has been tried on the Eastern of France Railway. To an express train running to Bar-le-Duc was attached a waggon fitted up with voltaic piles, and connected by means of wires and electric lamps in the carriages. When passing through the tunnels, the electricity being transmitted to the lamps, each compartment was at once brilliantly lighted. The experiments were considered satisfactory.

AT a late meeting of the Paris Municipal Council, the proposed grant of 10,000 francs towards the expense of erecting the cast of M. FALQUIÈRE's group, *The Triumph of the Revolution*, on the Arc de Triomphe, came up for consideration, but the Council refused approval. The whole charge of this costly experiment, estimated at from 30,000 to 40,000 francs, will therefore have to be borne by the sculptor himself.

A DEPUTATION from the Royal Institute of British Architects presented a memorial to the Metropolitan Board of Works at the meeting which was held last week. It related to the proposed improvements at Hyde Park Corner. Mr. HORACE JONES addressed the Board in support of the memorial, and said that the deputation came in no hostile spirit of criticism to oppose the plan which had been proposed by the Chief Commissioner of Works, but to point out to the Board, by reference to a plan which he produced, how the same advantages could be obtained at a saving of from 15,000*l.* to 20,000*l.* If that could be made clear, he thought that the plan would commend itself to the attention of the Board, and in order that the Board might thoroughly understand the plan, he asked that one of the members of the Royal Institute of British Architects should be allowed to attend a committee of the Board to explain it. The chairman said the Board had already agreed to contribute towards the scheme propounded by the First Commissioner of Works, and he thought this application came too late. Mr. HORACE JONES said the plan proposed by the First Commissioner of Works included the removal of the Duke of WELLINGTON's statue, and also the arch on which it is placed. If the statue was to be removed they ought to have some idea as to what was to be done with it, for not only the present Duke of WELLINGTON, but many others, would not like the statue to be sent back to the foundry. After a discussion, the memorial and plans were referred to the Works and General Purposes Committee for consideration and report.

AT the last meeting of the Société Libre des Artistes Français the protest voted at the extraordinary general meeting against Article 11 of the Statutes drawn up by the Committee of Ninety was confirmed and renewed. This Article enacts that the new Association shall be managed for the first three years by the present Committee, which may not be replaced either partially or as a whole during that period. The meeting also passed a resolution, proposed by M. FRAPPA, urging those members of the Society that form part of the Committee to bring about a meeting of that body for the purpose of reviewing and amending the Article in question. Another meeting, held last week, and attended by the sculptors belonging to the Société Libre des Artistes Français, passed almost unanimously a resolution protesting against the new regulation which changes the mode of naming the jury from choice by lot, as practised during the present year, to election in the ordinary way. It is evident from these dissensions that the new Association, to which all outsiders wish the greatest prosperity, is in some danger from dissensions among the members.





SPRA

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*from the Painting  
now London, Paris.*





AGRICULTURE: A DECORATIVE PICTURE.  
BY M. J. L. C. 1882.



## ILLUSTRATIONS.

AGRICULTURE: A DECORATIVE FRIEZE.—PART II.

## THE GLASGOW MUNICIPAL BUILDINGS.

THE scheme for the erection of new Municipal Buildings on the east side of George Square, has, says the *Glasgow Herald*, made very slow progress, and in view of the delay, which, if it has been unavoidable, is not the less unfortunate, our readers will be glad to learn that at length there is a prospect of definite action being taken. About two years ago the first architectural competition, open to the whole profession, was originated. The sum then fixed as the cost of the buildings for which designs were invited was 150,000*l*. It was thought at the time that the limitation to this amount was unfortunate, and in the end it proved to be so, for all the designs sent in were of such a character that a much larger outlay than that fixed by the Town Council would have been necessary in order to secure suitable buildings. There was nothing for it, therefore, but to abandon the scheme on this basis. Premiums were paid to the authors of the best designs, the competition which thus came to an end having cost in all about 1,500*l*. The Council next reconsidered the money question, and it was resolved that a sum of 250,000*l*. should be allowed for the new buildings, exclusive of fittings, furnishings, and internal decorations. Mr. Carrick, Master of Works, was directed to prepare plans indicating the extent of the accommodation which would be required, and with this to guide them architects were invited to forward a series of inexpensive sketch plans. This, it will be observed, was of the nature of a preliminary competition, and it was agreed to select the ten best drawings complying with the conditions laid down, and to request the authors to enter upon a second competition. They were now asked to forward complete and finished drawings, for each set of which the Council agreed to pay a fee of 150*l*. It was also arranged that in this competition the Council should be advised by Mr. Barry, of London, and Mr. Carrick, who were appointed joint assessors. The duty of the assessors was to examine the designs sent in by the ten competitors, and to report upon the four which in their opinion exhibited the highest merit, the special excellence of each to be indicated by the order of numbering—first, second, third, and fourth. The selection of the best design of the four was to remain with the Council, and this is the duty still falling to be discharged by the Lord Provost and his colleagues. When they have made up their minds as to the best design of the number, the author of it is to be entrusted with the execution of the work, assuming that the Council are satisfied as to his fitness for doing so; for it need hardly be said that it is one thing to prepare plans and quite another thing to superintend their translation into stone and lime. In the event of any insuperable objection being raised to the employment of the fortunate architect in the character of builder, the Council may select any of the other three architects, always under the guidance of Messrs. Barry & Carrick.

It was stipulated that the ten drawings in the new competition to which we have referred should be lodged with Dr. Marwick, Town Clerk, not later than May 30 last. On that date they were duly delivered, and have since been considered and adjudicated upon by the assessors, whose report recommending the four best designs of the series was submitted to a recent meeting of the Municipal Buildings Committee. In the belief, apparently, that there is wisdom in the multitude of counsellors, the committee invited all the members of Council to meet with Mr. Barry and Mr. Carrick in order to examine the designs, and a meeting for this purpose was held yesterday (Monday) afternoon, at the close of the public business of the Council. The assessors were in attendance, and gave such explanations with reference to the designs as were requested. The plans were displayed in a large room in a somewhat dingy building opposite the Mitchell Library; and as heavy rain was falling outside, with a thick, murky atmosphere, the lines of the proposed buildings were not seen under the favourable conditions of sunshine and cloudless skies shown in the designs of the architects.

The following is the report by Mr. Barry and Mr. Carrick on the plans in the final competition:—

"To the Lord Provost, Magistrates, and Town Council of the City of Glasgow.

"Westminster, June 26, 1882.

"My Lord and Gentlemen,—In accordance with our report to you on January 7 last, the authors of the ten designs sent in to the preliminary competition, and selected by us therein, were communicated with (but through agents, so that their names are still unknown to us), and they were asked whether they would be prepared to submit matured designs in accordance with the conditions for final competition approved by you. They all signified their readiness to do so, and ten sets of designs were duly received on June 1. Parliamentary work on behalf of the City of Glasgow rendered it necessary for Mr. Carrick to be in London during the month of June, but in order to be in a position to present our report to you with as little delay as possible we arranged to have the designs sent to London for us at once to examine them. We

have accordingly done so, and as the result of a very careful examination, and having made an approximate estimate of the cost to carry out each of the designs, we are now prepared, in accordance with clause 1 of the final condition, informing competitors of our functions as assessors, to place the following four designs in order of merit:—1, Viola; 2, S. Ronan; 3, Semplice; 4, Gauntlet. We have not the slightest idea who is the author of the design and set of drawings which exhibit it, sent under the motto of "Viola," which we have placed first in merit; but it is right to say that this design, in our opinion, shows great artistic excellence, while the working out of all the parts of the proposed building shown by the plan and sections are *prima facie* evidence on the part of its author of great constructive ability, and an excellent understanding of the requirements of such a building as regards arrangement, light and air, good intercommunication, sanitary and ventilating arrangements, and a due regard for economy. We have every reason to believe that this design can be carried out in an effective manner to the extent described in the conditions within the sum of 250,000*l*. therein allotted for the work.—We have the honour to subscribe ourselves your obedient servants,

"CHARLES BARRY.

"JOHN CARRICK."

A meeting of the Town Council was held on Thursday, when it was decided to adopt the design signed "Viola." The author is Mr. William Young, of London.

The following description of the designs is from the *Glasgow Herald*:—

## The Design by "Viola."

Dealing with the designs in the order indicated, the first, by "Viola," is in the Renaissance style, with frontages to George Square, George Street, John Street, and Cochrane Street. While generally following the diagram plan as originally approved of by the Town Council, the author of this design has made several important changes which are of the nature of evident improvements, enabling him, as they do, to add materially to the architectural effect of the block. The principal elevation is towards George Square. The central part forms the approach to the quadrangle, over which is the Council Chamber, well expressed by coupled Corinthian columns, backed by pilasters, and surmounted by an upper storey also formed of Corinthian columns, crowned by a pediment. This pediment has 60 feet of frontage, and the apex is 96 feet above the level of George Square, while on either side of the pediment rise two belfry towers 18 or 20 feet in height. Immediately below the Council Chamber is the entrance to the quadrangle and the main staircases leading to the floors above. The quadrangle is approached by a spacious loggia, having three wide archways, and forming a striking feature in the interior of the structure. The central archway, being intended for carriages, rises to a height of 25 feet, and it is 12 feet in width. Two side doorways, 17 feet high, and similar in style, form accesses to the main staircases. Above the central floor, occupied by the Council Chamber, are the upper and saloon storeys, lighted from the roof. The two under-storeys of this, as well as the other fronts, are treated as a basement, with massive rustic stonework, relieved with coupled Ionic columns and pilasters, between which the windows are placed. Behind the central pediment rises the grand tower to a height of 190 feet, and surmounting the apex of the pediment to the height of 96 feet. At its base, which is about 35 feet square, and for about 20 feet above the apex the treatment is plain rustic masonry, without openings. Overhead are other two courses formed of Ionic pillars, above which rises a circular colonnade of Ionic pillars. The colonnade is about 14 feet in diameter, and is surmounted by an elongated stone dome. At the base of the dome the effect is enriched, and the tower is made to graduate into the colonnade and dome by the introduction of statuary. The central front projects some seven or eight feet beyond the line of the building, and between it and the wings on either side is a recess forming a screen. The wings, which like the central front, also project beyond the screen, terminate with towers rising some 48 feet above the front balustrade.

The George Street façade has received from the artist almost as great attention as that bestowed on the elevation towards the Square. Generally, it may be stated that all round the block of buildings the third floor is architecturally emphasised. In the George Street front the Council Chamber is thus specialised, and in George Street the banqueting-hall is placed on the third floor, with double rows of massive Corinthian pillars supporting a handsome well-proportioned entablature, surmounted by a balustrade. Here, as in the other fronts, the wings are formed by a clever repetition of the tower front in George Square, and are in every way similarly treated as to projection and detail, while the harmony of design is further secured by the introduction of a screen between the wing towers and the centre. In the John Street elevation the Dean of Guild Court forms the leading feature, placed as it is on the third floor. Architecturally it corresponds with George Square, although the details are of a simpler character. Underneath are the gas and water offices with handsome entrances. Externally, the centre is surmounted by a plain pediment, flanked with balustrades along the whole length of the building. Turning now to Cochrane Street, we find that here again a correspondence of style is established with George Square and George



Street. A suite of committee-rooms occupy the third or floor of honour, marked by a repetition of lofty Corinthian pillars rising over the basement storey, and carrying a well-proportioned entablature and cornice and balustrade, with turreted belfries at the ends, which add much dignity to the elevation, and pleasingly break the sky-line. The Cochrane Street front has a doorway or carriage entrance, 22 feet high and 10 feet wide.

The leading features of the whole design may be said to consist in the handsome treatment of the third floor all round, and in the two under-storeys forming a massive basement, broken by Ionic pillars and surmounted by a bold, continuous line of cornice, a similar line of unbroken cornice being carried over the windows of the third or principal floor. The appearance of the building is relieved from all sense of flatness by the treatment of the centre and wings in the several fronts, and this feeling is further conveyed by the author having caused the upper floor all round to recede some seven or eight feet from the line of the lower storeys. This effect is obtained by the columnar formation of the principal floor. Considerable care has been taken with the quadrangle fronts, which form a most interesting architectural feature of the building. The general treatment is in strict harmony with that of the street elevations, the base being Ionic, surmounted by Corinthian pillars. Of course the design is, on the whole, less ornate than that of the fronts. As to the internal arrangements, two spacious staircases lead to the Council Chambers and the banquetting-hall. The latter is a noble apartment, 103 feet by 54 feet, having a circular ceiling 50 feet high. In connection with it there are three elegant reception saloons, which, with four saloons of a similar class on the fourth floor, will afford ample accommodation for social gatherings of the citizens, &c. The general decorative treatment of the banquetting-hall and staircase is in harmony with the leading design, the Corinthian details being finely repeated. The Council Chamber, again, is of such capacity that ample accommodation will be provided for the members and representatives of the press; while in addition there is room for the introduction of a "strangers' gallery." The dimensions of the chamber are 65 feet by 30 feet, with a recess in the centre, giving a width at that point of 40 feet. The chamber is lighted only on one side, but a circular dome supplies a plentiful supplement direct from the sun.

We may add that the elevations to George Square, George Street, and Cochrane Street are enriched by groups of statuary and statues. Fronting George Square, and including those in the tower on the apex of pediment, there are 27 groups and figures; in the George Street front there are 24; and in the Cochrane Street front about 18. John Street being mainly occupied with business offices, receives simple yet dignified treatment. The pediment crowning the central front of George Square is enriched by emblematic groups in relief, representing Britain and the Arts and Sciences; and the gateway in George Street is also relieved by carving. As indicating the effect which this building would have if we suppose it to be erected in the square as designed, it may be stated that its roof-line is 7 feet higher than that of the General Post-office, and the tower is some 55 feet higher than that of the Merchants' House, on the west side of George Square.

#### The Design by "S. Ronan."

The author of this design has likewise chosen the Renaissance style to express his conception of municipal buildings. In style and treatment it is very similar to No. 1, but the general effect is much less striking. The central portion of the main front to George Square is carried to a height of five storeys, and, like the wings, is projected. On the third floor is a series of lofty arched windows divided by pilasters, and crowning the whole is a pediment, which rises to a height of 96 feet from the level of the square. The wings, which are only four storeys high, are also carried forward to the line of the centre, and they each terminate in an elongated domed roof. The principal and most admirable feature of this plan consists in a finely-proportioned tower, which springs from the west front of the quadrangle, and rises to a height of 250 feet. From the level of the roof the tower rises in three courses, the first of plain dressed masonry, the second and third relieved by stately pillars, space being provided for a magnificent clock and peal of bells in the third course; the whole terminating with an elongated stone dome and lantern. The principal features of the main front are repeated in George Street and Cochrane Street, and the front to John Street is of a less ornate character. In the interior arrangements Mr. Carrick's block plan is generally followed.

#### The Design by "Semplice."

The author of this design has adopted a Venetian palace as the characteristic of his style. It differs from all the others mainly in the author having dispensed with a carriage entrance from George Square. Instead of providing carriage and foot entrances in his George Square front, he limits himself to one handsome foot entrance, some 30 feet high, by which the staircase leading to the Council Chamber and offices is reached. The banquetting-hall is entered by a grand staircase starting from the west side of the quadrangle, the carriage entrances to which are by George Street and Cochrane Street. This is the principal feature in which this design departs from the diagram plan, and the treatment given to it is clever and original. The George Square elevation shows an

extended front of continuous sky-line formed by the balustrade and roof surmounting the building, and broken only in the centre by a lofty tower some 250 feet in height, which is in admirable keeping with the Venetian character of the whole building, and is, in fact, a tasteful adaptation of the campanile in St. Mark's Square, Venice. In the upper portion of the tower there is a large clock dial, the two courses below the clock chamber and above the roof of the building being broken by windows. The most telling feature of the George Square front of the building proper is the third floor, which consists of a row of handsome arched windows, with pilasters between. The centre is filled up with a similar large arched window, supported by two smaller arched niches for statues. The centre of this front is emphasised by being surmounted by a semicircular pediment, filled in with sculptured subjects in relief. The windows of the second floor are square, and smaller than those on the third floor, while those of the first floor again are similar in style but still smaller. The base is partly rustic, all above being plain polished ashlar. The George Street front of this design will by many be considered more effective than that to George Square. The central portion is projected, and rises a floor higher than the rest of the building. Here the third floor is the principal one, and receives similar treatment to that of the George Square front. The floor above, limited to the centre of the front, is filled in with seven almost semicircular windows, and finished with a circular pediment in the centre. The portion of this front to the west of the centre receives somewhat different treatment in the disposition of windows, &c., from that to the east. In John Street there is only one entrance. The general treatment here is plainer than in the case of the other fronts. Pilasters are introduced at appropriate intervals, and a balustrade is carried along the roof. The Cochrane Street front is somewhat similarly displayed, the main features being a handsome carriage entrance with side doorways, a plain straight-lined pediment terminating the central portion.

#### The Design by "Gauntlet."

The design bearing this motto is also based on a Venetian palace. The leading feature in the George Square front is an elegant tower rising to a height of 250 feet; and, like that of "Semplice," it bears a strong resemblance to the campanile of St. Mark's Square, Venice. The second and third courses of this tower, which show above the roof, are utilised as bell-chambers, the clock which is placed in the first course having four dials. Immediately in front of the tower is a tastefully-conceived stone screen flanked by two square towers, each some 20 feet in height, the skyline being broken by statues. Between the designs of "Semplice" and "Gauntlet" the chief difference in the George Square front consists in the latter having slightly-projected wings, crowned with mansard roofs. Here again the third is the principal floor, and it is treated with circular windows, the windows in the wings being of considerably larger proportions than those in the body of the building. A pleasing portion of this design is a balustrade which is carried all along at the height of the roof; and a similar feature is introduced on the level of the second floor. The main doorway reaches to this balustrade and continues it; and on either side of the entrance are two huge statues or caryatides somewhere about 18 feet in height. The main features of the George Square front are reproduced in George Street and Cochrane Street; and the wings are crowned with mansard roofs. It may be added that in the centre of the principal front to George Square the words "Glasgow Municipal Buildings" are shown in bold lettering; on the John Street front the words "Offices of the Gas and Water Departments" are similarly inscribed; while the fronts to George Street and Cochrane Street each bear the legend, "Let Glasgow Flourish."

At a meeting of the Municipal Buildings Committee held on June 29, The Lord Provost submitted a letter, dated 15th inst., signed by Mr. Honeyman, president, and Mr. McLean, secretary, in name and by authority of the Council of the Glasgow Institute of Architects, suggesting that the several competitors in the preliminary competition should be invited by the Municipal Buildings Committee to return their designs for exhibition, and that all the designs should be publicly exhibited after the final award had been made. After fully considering the letter, the Committee were unanimously of opinion that it would not be expedient on the part of the Magistrates and Council to take any steps with a view to the exhibition suggested by the Council of the Institute.

**Monkstown, County Dublin.**—A tower and spire will be added to the church of St. Patrick. Portland stone will be used, as the Bath stone in the upper stage of the tower has decayed to such an extent as to necessitate the taking down of about 12 feet of masonry. The remainder of the spire will be of chiselled granite. The tower will be about 75 feet high, with two openings on each side, with polished granite columns, and carved and moulded arches. The spire will be 150 feet high, and will be surmounted by a wrought-iron cross. The cost will be about 1,600/. Mr. Long, of Kingstown, is the contractor, and the architect is Mr. J. L. Robinson, M.R.I.A.



## VENTILATION OF SEWERS.

A MEETING of the Yorkshire Associations of Medical Officers of Health was held in Doncaster on the 30th ult. under the presidency of Dr. North.

Mr. B. S. Brundell, C.E., read a paper on "Ventilation of Sewers." He said the question of the ventilation of sewers was by no means easy to treat in an interesting manner, and still more difficult was it to make the subject instructive, as so much had been already written and said on the subject. He would, however, endeavour to give a practical turn to the subject. It might be taken as clearly established that if the sewers of our towns were constructed with adequate self-cleansing "falls," and with proper flushing arrangements, and if at the outfall a free discharge of sewage could be secured at all times, there would not be much need for ventilation; for there would be no foul matter in the sewers out of which to create what was commonly called sewer gas. But, unfortunately, the great majority of towns were so situated that the sewers could only have gradients with small "falls," and too frequently the outfall was obliged to be either partly submerged, or, as in the case of pumping works, at certain periods inoperative, and hence sewage was stagnant for hours near the outfall, or moving so sluggishly that decomposition was set up, and sewer gas resulted. The question, therefore, arose how this could best be got rid of. The mode of ventilation of sewers which met with most favour was that of open gratings on the surface of the streets, and those had been found effective. In Leeds, and in some other towns, the gully gratings were now made to act as ventilators, the traps formerly used being removed. He had grave doubts as to the wisdom of leaving a place of escape close to a house or a shop door. Some openings emitted much more sewer gas than others; and it was therefore not only necessary to provide ventilation, but to ensure a current of fresh air. The openings consequently should not only be numerous, but well placed for the purpose—in fact, a constant interchange between the outer air and the sewers should be aimed at. Where there was a tendency for the gas to travel up the sewers, flap-valves should be placed so as to stop the upward current. No doubt much could be done by the owner of a house in the construction of such connections as would obviate the risk of sewer-gas finding its way into the house; but if the main sewers were properly ventilated the householders' precautions would not be nearly so necessary as they were at present. Another mode of ventilation which had been much advocated was that of exhaustion by connecting the sewers of a town with the furnaces of steam boilers; but this necessitated a peculiar construction of sewer, which would allow of the air being drawn from the sewers by the furnaces; and it was not clear what length of sewer could be so exhausted. Moreover, the furnaces of boilers were not always at hand. Still, no doubt, the principle was a good one, and he had tested it with success. The experience of Brighton was not very encouraging in this direction; and anything like the application of this principle of ventilation to the sewers of a town could not, he thought, be entertained. Ventilation by means of pipes carried up the chimneys of houses was sometimes adopted, terminating with an exhaust ventilator, and had been successful in some cases; but it should be carried out with great care, for in some places this system had been traced as the cause of blood poisoning. He would urge, as one conclusion to which he came, that main sewers should be systematically flushed; and the outfall of main sewers, as a rule, should have falling-doors, so as to prevent wind blowing up the sewers.

Mr. Masters read a paper on "The Circulation of Air in Sewers." Sewer-construction, he said, had been broadly distinguished by the terms "sewers of deposits" and "sewers of suspension." The former involved a system of flushing; in sewers of suspension a continual flow and circulation of air were provided. They were told on the best authority that sewers to be self-cleansing must have a certain grade, and he quoted from a table of inclinations, which gave the grade of a self-cleansing 15-inch drain at a fall of 1 in 250. He believed the most effectual means of creating a good current of air and ensuring the ventilation and thorough cleansing of the sewers was by a constant stream through the whole length of the sewers (instead of an occasional one), at a velocity of not less than 3 feet per second. It had been proved that the air would follow a stream travelling at 2 feet per second, in preference to rising to the highest point of the sewer. Any system of sewerage which provided for the removal of the sewage at so slow a rate that the sewer gas was left behind must be imperfect.

Dr. J. M. Wilson read a paper on "The Ventilation of House Drains." He said the house system of drainage should be provided with means of cutting off the waves of sewer air, or at least of giving them exit in a way harmless to the house inmates. He wished chiefly to elicit an opinion as to how far some principles of drain ventilation were satisfactorily answered by the requirements of the Local Government Board in their recent by-laws applicable to house drainage. That air from the house drains or sewers was in its effects injurious to health, and capable of originating definite forms of disease, they, as medical officers, had too many opportunities of confirming. These connections were as a

rule very defective. He proceeded to discuss the bye-law to which he referred. If, he said, it could be satisfactorily agreed that the plans proposed answered the theoretical requirements of the laws governing the action of gases, and—as their adoption was already being proved to be—more effectual than any previous practice in shutting off all air from the drains from entering the house, then he thought they might safely leave it to their engineering friends to smooth away any practical difficulties. To sanitary authorities and the public they could safely recommend a system which satisfied the principle of drain ventilation, and the adoption of which they might reasonably anticipate would rid us yet more of the class of diseases caused by what had been called aerial sewage.

The Chairman remarked that the question of the correctness of the germ theory underlay the discussion, and an important point to be considered was whether sewer-air was capable of carrying germs of disease.

Dr. Whitelegge, in referring to the first paper, remarked that if the ventilators to sewers were constructed sufficiently close to each other, it would be impossible for poisonous gas to accumulate in sufficient quantity to prove injurious.

Dr. Himes said that in the whole course of his experience he had never met with a case in which sewer-gas had produced specific disease. If it were true that sewer-gas did cause specific disease, medical officers would find themselves in the difficulty of having to condemn the present system of drainage in large towns. But where was the proof that sewer-gas was the cause of disease? A case of typhoid fever was found in a house, and an examination showed that the house was in direct communication with the main sewer. But so were thousands of houses in which there was no fever. In Sheffield there were acres upon acres without sewers of any kind, and so there were hundreds of villages, yet they did not find these districts any better off in respect of zymotic diseases. In his opinion it was matter for regret that sanitary authorities gave almost their entire attention to the causes of zymotic diseases, instead of endeavouring also to prevent, as they could in a great measure, that frightful scourge consumption, and probably also the large number of deaths from bronchitis and pneumonia, which were largely attributable to the same causes. But to return to the question of sewer-gas, in looking through the death-rate of his borough he did not find in those seasons in which the decomposition of sewer matter was most active that so many deaths from zymotic diseases were registered. In Croydon, where typhoid fever had been more or less prevalent, the bad smells found in many of the houses were assumed to be sufficient proof that sewer-gas was the cause of the fever. He did not think that was sufficient proof. His experience did not fortify the second-hand opinions which had been laid before the meeting relative to sewer-gas.

Dr. Wills suggested that water-spouts as conductors of sewer-gas were preferable, at least from an æsthetic point of view, to open shafts over which one had to walk.

Mr. Hodgson, C.E., remarked that it was a fundamental error to suppose that a certain amount of velocity in a sewer was all that was necessary to carry off sewer-gas. In connection with sewer ventilation, of whatever description, there must also be a system of cleansing.

Dr. Whitelegge urged these points for the acceptance of the meeting—namely, that sewer-gas did not mean merely a mixture of well-known chemical gases; that sewer-gas did not necessarily give off a bad smell; that it was not necessarily heavier or lighter than the surrounding air; and that it was deleterious.

The Chairman said he apprehended that sewer-gas was the sum total of all the vapours proceeding from the contents of sewers—nothing more nor less, in fact, than the results of decomposition, and varying at different seasons and in different temperatures, and in proportion to the contents of the sewer. In his judgment, a large amount of the most dangerous and pernicious gas was almost odourless. As the effect of its action, people were deprived of a great amount of the air they breathed. According to the teachings of the last fifteen or twenty years, all organic compounds in a stale condition were prone to excite other stale conditions in any organisms with which they came into contact, and the admission of these unstable compounds into our bodies was therefore, according to modern science, a fertile source of danger, and if they did not set up changes or actions in our bodies it was because we were in a condition to resist them. What was true of zymotic diseases was also true of noxious diseases arising from these causes. Then in these sewers we had the undoubted carriers of these noxious germs. By means of the connection between houses and sewers the infectious diseases of one house were carried to other families. And we had these diseases let into our houses in every possible way—by bath-rooms, by water-closets, and by other ways—and the only way of escape was by complete isolation from our neighbours. He frequently advised his friends to open out all dead ends of pipes and drains, so that there should be free and perfect exposure to the air. If we could have impervious floors and walls with, practically, open ditches for drains, we should best stave off disease; those who lived in villages would know quite well that the open ditch was far less offensive than a good many of our more expensively constructed sewers.



## THE IRISH BOARD OF WORKS.

THE fiftieth annual report of the Irish Board of Works has been issued. The loans authorised for all purposes during the year ended March 31, 1882, number 561, and amount to 841,954*l*. This aggregate of loan transactions is very much less than that for the two preceding years, which embraced transactions rendered necessary for the relief of distress during those years, the amounts in 1879-80 and 1880-81 having been respectively 988,359*l*. and 703,390*l*. The list contains seventeen loans for labourers' dwellings in towns, amounting to 33,674*l*., against 28,870*l*. in 1880-81; fifty loans were made for glebe-houses, against fifty-eight, covering a total appropriation of 18,506*l*., against 24,639*l*. in the former year. The total amount applied to those services now amounts to 300,540*l*. The Public Health loans, which last year from exceptional causes embraced seventy-two sanitary works estimated to cost 205,187*l*., provide in the present year for only these works at a cost of 132,683*l*.

Under the 19th section of the Land Law Act the duty devolves on the Board of making advances to tenants for the improvement of labourers' cottages on their holdings, or for the building of new cottages when directed by the Land Commission Court in fixing judicial rents to provide such accommodation, tenants so directed being deemed to be persons to whom loans may be made under the Landed Property Acts. No loan can be made for a less sum than 100*l*. Only three applications were received. The necessary inquiries, including the copy of the order of the Land Court and the publication of the notice of application, were at once proceeded with, but the time inevitably occupied in making these inquiries has not admitted up to the close of the financial year, ending March 31, of any of them being brought to that final stage in which the Treasury sanction would be applied for. Regarding these loans, if the course of proceedings which is required to be taken in respect of ordinary loans be strictly adhered to, the costs which, so far as they are preliminary in a deduction from the loans, would be altogether disproportionate to the small sums which as a rule they may be expected to amount to. With a view, therefore, to minimise the costs as much as possible, and thus to facilitate and at the same time expedite the granting of these loans, the Board sought and obtained sanction to the entries of inspection, and, when necessary, the preparation of plans and specifications being carried out by the inspectors appointed to conduct field operations under the 31st section, thereby admitting in several cases a considerable saving in cost and time.

## ELECTRIC RAILWAYS.

ON June 26 a lecture was delivered by Dr. Traill on "Electricity as a Motive Power," in the New Buildings Trinity College, Dublin. He said the application of electricity as a motive power to railways was now within the reach of practical engineering. Already a tramway, to be worked in this manner from Portrush to the Giant's Causeway, six miles in length, had been projected; and it was now approaching completion. The largest railway of the kind hitherto constructed was in Berlin, and was only two miles long. The electricity is generated at one end of the railway and is transmitted along the rails to machinery within the railway carriage which works the driving wheels. The lecturer gave a history of the various steps which had been made since the time of Faraday towards the perfection of the electrical apparatus necessary for this purpose, the greatest improvements having been made by Dr. Siemens, whose improvements had brought this application of electricity within the region of practical engineering. A powerful saw was made to cut wood by the application of electricity. In the case of a railway or tramway the current could be applied to any number of cars one placed after another. One great advantage of this motive power was that it got rid of the immense weight of the steam-engine and tender, and the consequent wear and tear that occurred to the rails. This could not be expected to be realised in the great arterial lines, on which the use of steam would have to be retained. At present the electrical motive power was chiefly applicable to small feeding lines, and these could be made cheaper than the others, because they would have less wear and tear to resist. Another advantage was that the greatest power was developed at the moment of starting. Inclines could be more easily ascended, because while the weight of the trains would be less, the electrical machines could be placed in every second carriage if necessary. Again, when the primary current was cut off, the inverse current would act as a brake. The occurrence of a curve, an incline, or any other obstacle, caused the machinery to develop extra motor force. No danger from the electric rails would occur to man or animals. In the course of his lecture Dr. Traill exhibited and explained a number of machines, and in conclusion said that now that steam-engines and windmills and small streams could be employed to store up electricity, possibly in time the pulsations of the great ocean itself might be employed for the same purpose, so that even the whirlings of the globe in space would have been harnessed to work the machinery of man.

Dr. Charles Siemens said he had been for more than thirty

years connected with electricity, and yet he had heard Dr. Traill with interest, and had enjoyed his lecture. Electricity had been made to span the earth as the transmitter of their messages, but it was not until very recent times that this agent, which seemed to possess swiftness without power, had been also made use of to transmit power itself in considerable quantities. The manner in which the power was accumulated was a simple matter of addition. Certain mechanical repetitions produced an accumulation like that of the drops of rain which produced rivers. Each individual current was like the drop falling from the skies, and these made a river of electricity for the required work. Dr. Traill had shown that he was conversant with the practical as well as the theoretical views of the subject. Would these railways be reliable? The Berlin railway, of which a photograph had been shown, had answered extremely well, but it had been put up only for experimental purposes. A line of 4 feet 8½ inches gauge had been made at Paris, but it had only been worked for a few months. During that time, however, it conveyed nearly a hundred thousand passengers, and never once failed. A question had occupied men's minds—namely, that of supposed danger from the rails. When the experimental line was first established at Berlin people tried whether there was any electrical discharge from the rails, and found that there was an influence which was productive of a very peculiar sensation; and the result was that after the car had passed hundreds of persons would throw themselves down on the line as if they were worshippers of the car of Juggernaut, in order to experience this pleasurable sensation. He (Dr. Siemens) was conducting a number of operations, such as pumping, chaff-cutting, &c., by the aid of electricity, on his farm at Tunbridge Wells. He trusted the time was not far distant when those whom he addressed would be able to satisfy themselves from actual experience as to the working of an electric railway.

## PUBLIC OFFICES, OVER DARWEN.

THE new Market House and Municipal Offices at Over Darwen were formally opened on June 21, by Mr. Grafton, M.P. for East Lancashire, in the unavoidable absence of Lord Hartington. The works have been in hand two years, and were the result of a competition for which Mr. Waterhouse was the assessor in 1879, when the first premiums for the Town Hall and Market House were gained by Mr. Charles Bell, F.R.I.B.A., of London, and by whom the market has been successfully carried out. The Town Hall is deferred for a time. The building is admitted by all to be excellently adapted to its twofold purpose, and a very creditable result alike to the architect and to the Corporation, who, in accepting the award of their adviser in the competition, have had no reason to regret it.

The market faces north and south, and consists of a central area 130 feet by 80 feet, covered with an iron roof in two semi-circular spans, and supported only by three columns. It is glazed on the north side by Rendle's system, and covered with zinc on the south side. On the north are six butchers' shops opening into the market, lined with glazed bricks, the floors being of wood blocks.

There are two main entrances to the market, north and south, enclosed by wrought-iron gates of elaborate designs. There are also two other entrances past the fish-stalls from the wholesale market. Those and the shops facing the square are enclosed by Salmon, Barnes & Co.'s wood shutters. There are also a row of shops facing the market square, having walnut fronts, and each with a cellar below reached by a circular iron staircase. The whole area of the market is cellared, and some difficulty was met with in their execution owing to the River Darwen passing from east to west across the site. It was, however, successfully and temporarily diverted, and solid retaining walls built, between which it now flows. The walls above being carried by iron girders, as is the whole of the market floor, with brick arches, and paved with Lowe's patent concrete.

There are convenient fish and game stalls on the west side, fitted up in a very complete manner, and outside there is a wholesale market open at each end to the Market Square, and to School Street, and glazed like the general market.

Above the south and east fronts are a spacious and well-arranged set of offices appropriated to the use of the Corporation, comprising council chamber (50 feet by 20 feet), mayor's parlour, committee-room, borough surveyor and gas and water engineer's offices, with lavatories, &c. On an upper floor are a number of spare rooms, part being used for the caretaker. Over the main entrance is a turret of teak and lead for a clock. The offices are reached by a separate entrance and staircase from the square, and those on the south front by a corridor supported on ornamental iron cantilevers, with hand-rail and iron panels from the market wall.

The whole of the exterior is of Darwen stone, designed in a simple but effective Italian style, to suit the material and surroundings. The interior is being faced with the Silkstone Brick Company's buff bricks. Carving is introduced in the spandrels of main entrance arch and in the coupled pilasters supporting main gable, in the tympanum of which are the town arms in bold relief, and in the panels of the centre window over entrance are the crests of the



mayors in whose terms of office the building was begun and completed—viz., Messrs. Aldermen Snape, J.P., and Green, J.P.—all executed by Mr. Gregg, of Darwen. The roofs are of green slate with red ridges. The ironwork of the basement was carried out by Messrs. Handyside, of Derby; the roofs by Messrs. Goddard & Massey, of Nottingham. All the grates in the offices are by Mr. Shorland, of Manchester. The general contractors were Messrs. Orrell & Son, of Darwen. Messrs. Haden & Co. supplied the zinc. Mr. A. D. Dawnay, M.I.C.E., acted as consulting engineer. The water-closets, lavatories, and the whole of the sanitary appliances were supplied and fixed by Mr. Stidder, of Southwark Bridge Road, London.

The total cost of the building has been 25,000*l.*, including the heavy and expensive foundations not originally contemplated. Mr. Hobson Haigh efficiently acted as clerk of the works.

### REGULATIONS OF THEATRES.

THE following are the regulations for the control of theatres which it is proposed to establish in Austria:—In every town where there is a theatre a local commission is to be appointed, composed of representatives of the municipal authorities, the police, the medical profession, the fire brigade, and impartial experts. These are to exercise a general supervision. Further, a similar local commission, but comprising members of the Diet, is to be attached to the Stadtholder's office in each province. All new theatres are to be detached from other buildings, and are to contain no store or painting rooms. Every inflammable substance used in the performances is to be impregnated with fire-resisting fluids; and the most minute precautions are to be taken for ensuring proper inspection. It will also be provided that there shall be an open gangway between every six rows of seats, that a shaft for the escape of smoke shall be erected, and that the number of the audience shall be strictly limited to the capacity of the theatre.

### THE SCOTTISH LAW OF UNCOMPLETED CONTRACTS.

A CASE of some importance to parties entering into contracts with tradesmen has been decided in the Debts Recovery Court, Glasgow, by Sheriff Balfour. Mr. David Forrester, ironmonger, West George Street, sued Mr. Walter Parlane, 25 Elmbank Crescent, for 20*l.*, being the price at which the pursuer agreed to furnish and lay a set of hall tiles in a new house at Somerset Place, belonging to the defender, which tiles were selected and fixed upon in the pursuer's shop after rejection of the first lot of tiles delivered to the defender. The defence was stated that the tiles first supplied by the pursuer were in great part defective, and that in lieu thereof the pursuer agreed to submit fresh patterns for approbation, but that no new agreement was come to with regard to the substituted tiles, and that on delivery of the second lot the defender was justified in rejecting them as unsatisfactory and cancelling the contract. The technical objection was further stated on behalf of the defender that the pursuer, in raising an action for the contract price of a job which had been only partially executed, had mistaken his remedy, and that he ought to have raised an action of damages in respect of defender's failure to fulfil his part of the contract by payment of the price agreed upon. The sheriff-substitute, after finding upon the facts that the weight of evidence is in favour of the pursuer's contention that defender, on April 5, 1882, fixed upon the pattern of tiles which were afterwards delivered to him, and that all still remaining to be done by the pursuer is the laying of the tiles, the floor having been made ready for their reception, and the tiles being in defender's house ready to be laid, grants decree for the full contract price and expenses, and repels the objection as to the form of action in the following terms:—"As to the second objection, the defender's agent maintained, in accordance with English law, that as this was a contract for the sale of goods not specific, but to be measured before delivery, the property had not passed, and the vendor's action was an action of damages, and he cited 'Benjamin on Sale' in proof of his proposition. It appears to me that English law is not applicable to the case, because if the criterion be the non-passing of the property, then in all cases in Scotland where goods are not delivered the seller is only entitled to bring an action for damages, because in Scotland, although you have a distinct specific subject sold, the property does not pass until delivery. The only circumstance which can give a colour to this being a different case from the ordinary case of specific goods, is that the pursuer has still to lay the tiles. The answer to that is that he has lifted the pavement, cut the doorstep and the concrete, delivered the tiles, and the simple operation of laying them is prevented by the defender's own act. On the merits of the case I am clearly of opinion that the pursuer, by the evidence of himself, his clerk, and workman, has established that on April 5 the defender chose the blue and white tiles, and was pleased with them."

Mr. Ewan Christian, diocesan architect, is preparing plans for the restoration of St. Leonard's Church, Bilston.

### BUILDING REGULATIONS IN PARIS.

THE Commission charged with the revision of the building regulations in the French capital has drawn up a project to take the place of the decrees of 1859 and 1872, by which the height and arrangements of houses in Paris are now regulated. This project, which has been favourably received by M. Watel, the reporter of the Municipal Council, will shortly be supplemented by another laying down the requisite interior sanitary arrangements.

Under the old rules the heights of houses were 11, 14, and for the widest thoroughfares 17½ metres. It is now proposed to alter these as follows:—

12 mètres in streets less than	7m. 80c. in width.
15 " " " from 7m. 80c. to 9m. 74c. "	
18 " " " " 9m. 74c. to 20m. "	
20 " " " " 20m. and upwards.	

The last class is, however, subject to the conditions—(1) that there shall not be more than five floors, *entresol* included, above the ground-floor, so that no part of the 20 metres may be used to make a sixth storey; (2) that each building shall have an interior courtyard of not less than 40 square metres area, the opposite sides of which shall in no case be nearer than 4½ metres, nor the angles between two contiguous sides to be less than 60 deg. This courtyard will not be obligatory in the case of buildings facing on several streets, and entirely filling up the space between said thoroughfares.

At first sight it would seem a change for the worse to allow the height of houses to be still further increased in Paris; but the alteration has really been made in the interest of the occupiers, for by Article 8 of the project it is laid down that no storey shall be constructed in any building whatever of a less height than 2 metres 60 centimètres, this measure, in the case of a floor or rooms built in the roof, being taken from the highest point. This is a good average; but, as a matter of fact, in most houses of 20 metres each storey will be at least 3 metres, the lower ones 4, and in some cases 5 metres. The new law will, once for all, put an end to the construction of more of those wretched *entresols* so common in the largest Paris houses, and in which it is impossible to raise one's arm without touching the ceiling, or have any furniture of decent size.

The system of aération is entirely changed under the new regulations. The passages, vestibules, and corridors must be well ventilated and lighted; while, as respects the interior courtyards and small courts, it is enacted—(1) that every court serving solely to light the kitchens must be of at least 8 metres surface, with not less than 2 metres distance between opposite sides, nor less than 60 degrees angle between contiguous ones; (2) that every court serving solely to give light and air to the water-closets must be of at least 4 metres surface, with not less than 1 metre 60 centimètres distance between opposite sides, nor less than 60 degrees angle between contiguous ones. Finally, every court that has no communication with the street must be ventilated from the bottom.

If adopted, these regulations will revolutionise the present mode of construction in Paris, and will prove an inestimable boon to occupiers of every class, and particularly the poor.

### THE LATE FRANCOIS GUIGON.

FRANCOIS GUIGON, a Swiss landscape-painter of some note, died early in June at Geneva, where, seventy-five years ago, he was born. Guigon belonged to the school of Genevan painters, which, under the influence of Rousseau, Horace Benedict, Saussure, and Toepffer, sought its inspiration in the history of the Helvetic Confederation and in the grand scenery of the Alps. While Lugardon told the heroic legends of primitive Switzerland, and Calaine and Diday transferred to canvas the wilder scenery of lofty peaks—glacier and snowstorm, whirling avalanche and föhn-swept forest—Guigon's genius led him to prefer the middle region. He liked best to depict the softer beauty of mountain pastures and the more tranquil landscapes of the lakes. The subjects of his best paintings are scenes about the lakes of Brienz and the Four Cantons. When his favourite domain was invaded by the crowd, and all the world took to painting Swiss lakes, Guigon sought his subjects on the other side of the Alps, in the plains of Italy, in the palaces and canals of Venice, and on the shores of the Adriatic. He laid down the brush only the day before he laid down his life, and, though he had rather outlived his reputation, his influence on Swiss art was considerable, and his blameless life and kindness greatly endeared him to his fellow-citizens.

**Reading.**—The foundation-stone of the new district church of St. Luke has been laid. The materials used in the construction will be local bricks, with picked red relieved with grey for outside facing. The dressings, &c., will be of Doulton stone. The church will seat about 600 worshippers, and will be warmed by hot and cold air flues, fitted up by the London Warming and Ventilating Company. Mr. John Bottrill, of Reading, is the contractor, and Mr. Robert Williams, clerk of Works. The architect is Mr. J. P. St. Aubyn, of the Temple.





### The Cyrene "Apollo."

SIR,—As regards such imputations as that I ignored what Mr. A. S. Murray had published on the subject of the Cyrene *Apollo*—people can only ignore what they are quite familiar with—and that I am even capable myself of making such an imputation on Dr. Waldstein, I should be a little ashamed of thinking it necessary to defend myself against them, and I leave them where I find them. My feeling towards those who never knew or forget what I have written on a common subject is one—not unusual I believe, or unamiable—of pure commiseration; weak, perhaps, but not wicked. In such cases—at least "with us of the right-hand file"—

Veniam petimus damusque vicissim.

I regret on several accounts that the observations of Mr. A. S. Murray—one especially—were not present to me when I wrote my article. I find that in his work dated 1880 he recognises the correspondence of the Cyrene head with that of the statue which he takes for granted as an *Apollo* without reasons assigned, and moreover, without reference to a difference of opinion on the subject on the part of Professor Boetticher, of Berlin, or any one else; neither in what is said of the style of the figure is there any recognition by Mr. A. S. Murray of the peculiar athletic development which caused the Dilettanti Society to publish it long ago as *The Athletic Apollo*, and not unnaturally induced Dr. Waldstein, quite independently of knowledge of their work, and Professor Boetticher also, to claim it as a mere 'iconic' statue of an Olympic victor. It is in this characteristic that a main significance of the statue resides, and, when this is left out of consideration, giving it the name of *Apollo* or any other name does not go for much. It may be my misfortune that a distinct protest of Mr. A. S. Murray against the chorus of applause that has greeted Dr. Waldstein's heresy has not reached me; but it was clearly time for some one to speak out with something more than a dogmatic opinion, for his views have just received further sanction and circulation by an unqualified approval embedded in the heavy but authoritative verbiage of Professor Overbeck's new edition of his "History of Greek Sculpture."

I am grateful for the reference by Mr. A. S. Murray to the note in which he mentions the agreement of the head of the statue and the Cyrene head with that on an archaic Cyrenian coin; it goes far to prove that *Apollo* was held in especial honour by the state under this particular type; shall I be too adventurous in following forth the indication? The statue has frequently been claimed as a copy of the *Apollo Alexicacus*—the Averter of Evil—the work of Calamis, a sculptor placed intermediately between Canachus and Myron. It was dedicated by the Athenians with this title in gratitude for relief from a pestilence by an oracle from Delphi. The identification would be nearly clenched if it could be established that the copy existing at Athens, which unluckily has lost its feet, did really stand on the *omphalos*, symbol of the Delphic oracle, which is associated with it—an association doubted, Mr. A. S. Murray thinks, and I presume from personal observation, without satisfactory reasons. What type, then, could the sculptor more appropriately adopt for the oracular Delphic god, as helpful and healthful, than his statue in his properly Delphic character as patron of athletic vigour—as *Apollo Puktes*, the pugilistic.

But now the sequel. When Pindar celebrates the chariot race victory which was gained at Delphi by the Cyrenian king Arcesilaus, he takes occasion to glorify *Apollo* as author of "remedies for the grievous maladies both of men and women," and describes the processions to his temple along a road of state to propitiate him as Averter of evils from mortals. The scholiast on the passage gives the precisely explanatory synonym—*Alexicacus*.

By the light of these combinations I could find in my heart to be indulgent to one who should be even positive that the athletic *Apollo* of the Museum represents the Evil-Averter of Calamis, whose expressive ideal of the god in this character was so celebrated as to cause it to be copied over and over again, and particularly for one of the principal temples at Cyrene, where he had honours under an equivalent title.

But alas! Dr. Waldstein declares a positive opinion, and supports it by engravings, that the legs of the Athenian statue are out of position to suit the imprint of soles of feet on the *omphalos*. Professional experts being thus hopelessly at odds, our theory swings in suspense, and we must await the report of a laic "of plain good sense, untutored in the schools," who has no theory at stake in the matter to influence his judgment or to oblige us prudentially to reserve our own.

Very truly yours,  
W. WATKISS LLOYD.

### Peterchurch.

SIR,—The valley of the Wye is not only one of the most beautiful districts in England, but it is replete with objects of archaeological and architectural interest. Some of your readers may have been in the interior of the church of Ross, and been struck by the unwonted appearance of a tree growing *within* the walls at the west end. Representations of this appear in the guide-books, and photographs of it are common. There is another freak of nature at Peterchurch which I have never seen reference made to. The Rev. C. M. Metcalfe does not appear to have alluded to it in the paper he read to the Woolhope Field Club, as reported in your paper of the 1st instant, yet it struck me as a very remarkable object.

When I was taking a view of the surroundings from a window of the comfortable little inn at Peterchurch, which is situated about 300 or 400 feet from the church, I was puzzled by the appearance of a large yew tree in the churchyard, the dark foliage of which seemed to carry a mass of white blossom. Upon closer inspection, it appeared that an alder tree was firmly rooted amongst the branches and was in full bloom. There must have been a considerable quantity of decayed vegetable matter accumulated at the junction of the branches of the tree with its trunk in order to support the alder bush in its unwonted position, for it was of considerable size and in full vigour. Flowering parasites, having their roots in the ground, are common; but I have never come across another instance like the present one.

I am, sir, your obedient servant,  
Edinburgh: July 4, 1882.

### REVIEWS.

THE OPEN FIREPLACE IN ALL AGES. By J. PICKERING PUTNAM, Architect. New Edition. Boston: Osgood & Co., London: Trübner & Co.

This book suggests how much may be made of any subject connected with building when it is treated by a competent authority. But architectural literature is deficient in books of its class. Although the open fireplace may be said to be an institution, it is only by means of a work like Mr. Putnam's, which is historical and scientific, that the importance of the subject and its relation to national life can be realised. A large number of illustrations are given, which represent some of the grand fireplaces in Belgium, and France, including those in the Council Chamber at Courtrai, the Salle de Mars, St. Germain en Laye, the Guard Chamber at Dijon, the house of Jaques Cœur, the Château de Coucy, and the Grand Hall at Poitiers. The principal systems for the improvement of the fireplace which have been devised from time to time in Europe and in America are described, and the author enters at great length into an arrangement which he has adopted in his own house. Several examples of the fireplaces designed by modern architects in America are given. Altogether the volume is a most valuable treatise on an important subject.

JAPANESE MARKS AND SEALS. By JAMES LORD BOWES. London and Manchester: Henry Sotheran & Co.

Mr. Bowes has in this volume given facsimiles of an immense number—probably a thousand—of the marks which have been used by the Japanese artists to distinguish their works. They refer to pottery, illuminated manuscripts and printed books, lacquer, enamels, metal, wood, and ivory carvings. It may be inferred from the title that the book corresponds with those which have been compiled for the guidance of purchasers of pottery, but the book is of a more important character. It enables us to understand something of the history of arts which have been hitherto obscure. The marks suggest that Japanese art is of "more modern growth than is generally supposed," and may be dated from the third Shogun—i.e. 1623 to 1649 A.D. In 1650 the manufacture of decorative faience began in Kioto, and, according to Mr. Bowes, "it is probable that the earliest examples of pottery of an artistic character other than Old Japan date from this time." Those who have imagined that Japanese art is of great antiquity will be surprised at this, and at another statement of Mr. Bowes, in which he says that "perhaps the most brilliant period of Japanese art was the last century and the earlier years of the present one."

One of the differences between Chinese and Japanese pottery is, that the former represents the work of many hands, while in Japan the advantages of individuality rather than of the division of labour are recognised. The name of the potter is therefore more often found on Japanese pieces, and generally it is painted. Mr. Bowes says that "impressed marks are very seldom found upon porcelain." Sometimes the age of the artist is given; in one example cited by Mr. Bowes the potter's age was sixty-two, in another seventy-two. When two men work together the fact is duly recorded. But the marks do not always consist of names. Inscriptions are written which are occasionally suggestive of those found on bells in Western Europe. "A desire for long life is often expressed, such as 'A thousand autumns'; 'To enjoy the longevity of the pine tree and the age of the stork.' Lines of poetry are also inscribed, which may refer to the subject represented by the artist. On the side of one vase are lines on a grove of



bamboos, which mean "When the wind rises the sound is pleasant! When the rain falls the colour is lovely."

The marks on the illuminated manuscripts and printed books are more matter-of-fact in character, and they generally refer to the name of the author, the number of the volume, or the subject of the work. One of the manuscripts described is a collection of paintings on silk of flowering shrubs, by Ki-No-Masa-tami, which were painted between 1804 and 1818. The preface is written on yellow silk, and is a superb example of calligraphy. It contains a most interesting exposition of the principles on which the artist worked, and indicates that the Japanese painters are aware of the difference between pictorial art and scientific representations. The following is a translation of the document:—

Those who paint flowering shrubs and rare grasses cannot do better than conceive the spirit of their natural power of growth. As to whether the branches should be bending downward or looking upward—whether the leaves should be thick or thin—whether the flowers should show their faces or backs—whether the colours should be deep or light—how can we attain perfection unless we study from the very objects? But we always find our power unequal to the task when we come to the flowers of some humble plants, whose daintiness and brilliancy dazzle our vision, and in which there is the sweet colour of life and growth. Indeed, they are beyond the sphere of the art, because there is no surrounding object by means of which we can impart life to the bare flowers. Therefore in this pursuit it is only necessary that we should do our best in preserving the shapes, the aspects, and peculiarities of the flowers, which we intend to produce. Whenever I see a flower or a grass, I never fail, in spite of my meagre ability in painting, to copy it out, so that it may serve the purpose of a model in the future. Indeed, those who are called botanists do not fail to paint plants, and their flowers and fruits, in the most minute way, and though they seem never to leave one single point untouched, yet they too often spoil the style of painting, and besides lose the fine spirit. Such is far from what I desire. In short, I know only to satisfy the extreme disposition of my own mind, and make this work the measure of my study.

It is surprising that works in lacquer are rarely marked, especially those which were produced for a patron, and among the old *cloisonné* enamels examined by Mr. Bowes only two bore the names of the makers. The bronze founders are also unrecorded, "nor do the makers of the exquisite modern bronze flower-vases and other objects follow the examples of the potters of their country in signing or otherwise marking their productions." The makers of swords and mirrors and the ivory-carvers are more desirous of recognition. Sticks of ink also bear the names of the makers. One described by Mr. Bowes is a sacred object, as it was made of the soot from the sacred fire in the temple of Kasuga.

The marks are most difficult to copy, but they have been reproduced in Mr. Bowes' volume with a freedom and vigour that are more suggestive of a manuscript than of pages printed in a type-press. Reproduction of this kind would have been impossible a few years ago. Mr. Bowes' volume is interesting by itself, and forms a worthy company to the "Ceramic Art of Japan," of which he was the joint author.

#### EXAMPLES OF IRON ROOFS. By THOMAS TIMMINS. Published by the Author.

The examples of roofs which have been prepared by Mr. Timmins are not to be confounded with the diagrams that are found in books on iron construction. The latter may be explanatory of a theory, but they are not adapted for immediate utilisation. Mr. Timmins does not concern himself with an investigation of the mechanics of roofs. He gives the results in a form which can be copied directly by the draughtsman, or adapted without difficulty. The spans selected are those which are most often treated in every-day practice, and range from 20 feet to 60 feet. With wider roofs there may be so many contingencies to be considered, it is not safe to prepare drawings without special investigations. Mr. Timmins' drawings show a recognition of other considerations besides those of stability and form. There is no excess of material in any of the parts, and the scantlings employed are those which are available in the market without incurring extra cost. As the dimensions of the details are figured and the weights are supplied, it is practicable by means of the examples to prepare a general design or working drawings for a roof, and to furnish an approximate estimate of cost with rapidity. Two sheets of graphic diagrams are supplied indicating the strains on the trusses under various loads, and these should be gone over carefully by the student, for it is unworthy of a professional man to employ a means which he does not understand. In fact it would be an advantage if Mr. Timmins' examples were taken as supplementary to books on construction, and as proving the relation between practice and theory. A table showing the strength of cast-iron columns is given, which extends to diameters of 16 inches and to lengths of 30 feet—in other words, it furnishes double the information of ordinary tables. The plates are clear and well fitted for application.

#### LECTURES ON THE SCIENCE AND ART OF SANITARY PLUMBING. By S. STEVEN'S HELLYER. Published by E. T. Batsford.

Mr. Hellyer has accomplished the difficult task of producing a book on a sanitary subject which is readable throughout. He appears to possess the qualifications of a popular lecturer, and

although the workmen to whom the course was addressed may have been familiar with much that was told to them, the subject was presented in so lively a manner that the oldest foreman could hardly be bored. Mr. Hellyer is a plain speaker, who does not mince matters, and it cannot be denied that there are too many defects in houses which allow opportunities for censure to a man of his class. Mr. Hellyer's book, which is full of suggestions and of information that is not commonly seen in print, deserves to be widely circulated among practical men. It has been published at a cheap rate.

### CHURCH BUILDINGS AND RESTORATION.

**Blackburn.**—The corner-stone of the new tower and façade of St. Alban's Church, Blackburn, was laid lately by the Bishop of Salford. The new portion is built of Yorkshire pier-points in broken courses, with ashlar dressings, and projects 34 feet 6 inches from the line of old front. The tower is placed in the centre of the façade, and serves as a central porch; it is 17 feet square, 64 feet high to square of roof, and 87 feet from the ground to the top of the cross. On the west of the tower is a porch, 16 feet 9 inches by 14 feet 3 inches, with entrance to church and a staircase leading to gallery floor. On the east side is a space of corresponding size, arranged with open benches. On the gallery floor is the choir, 21 feet 9 inches by 19 feet 6 inches, on the east side of which are open benches, and on the opposite one is the staircase landing. The total accommodation provides for 120 additional sittings. The design is Romanesque, with deep moulded strings and cornice table. The windows have shafts with moulded caps and bases, and are circular-headed, with hood-molds over. Angle pilasters are carried up to the square of tower, which is roofed over with slates, the apex being surmounted with a cross 8 feet high. The internal fittings are of pitch-pine, which will be stained and varnished. The floor will be laid with tiles, and the windows are to be glazed with cathedral tinted glass in patterns. The cost of the work amounts to 2,000*l.*, and has been let as follows:—Mason's work, Ramsbottom & Sons, Accrington; joiner's work, W. Cronshaw, Blackburn; slaters, Dyson & Son, Blackburn; plumber, J. Chadburn, Blackburn; plasterer, T. Murphy, Blackburn; painter, R. Duerden, Blackburn; carver, J. Gregg, Darwen. The architect is Mr. William S. Varley, F.R.I.B.A., 15 Richmond Terrace, Blackburn.

**Salford.**—A new Primitive Methodist chapel has been opened in Trafford Road, Salford. The cost of the building and of the schools attached has been 4,200*l.*, of which 2,700*l.* has already been raised. The former sum includes the purchase of the freehold. The new chapel is designed for 500 persons, and has been erected from the design of Mr. Fell, the contract having been entrusted to Mr. J. Gerrard, of Swinton.

**Liverpool.**—The foundation-stone has been laid of a new mission church in Earle Road. The style is Gothic. The church will accommodate 500 persons, and will be available for school purposes. The work is being carried out by Messrs. Nicholson & Ayre, of Wellington Road, Liverpool, as general contractors, under the superintendence of Mr. James N. Crofts, architect, of Harrington Street. Mr. Don is clerk of works.

**Burton.**—The church of Holy Trinity, Burton-on-Trent, has been opened. The edifice has been erected in place of an old one, from the plans of Mr. John Oldrid Scott, by Messrs. Horsman & Co., contractors, of Wolverhampton; the outlay, with purchase of land and other expenses, being about 21,000*l.* The building is of stone, with dressings of two varieties of Bath stone, relieved by red Alton stone, the walls faced with ashlar internally. On the exterior the red stone is used, with walling of Yorkshire parpoints. The hot-water apparatus is supplied by Messrs. Musgrave, of Belfast.

**Machynllyth.**—A new Wesleyan chapel, erected from the designs of Mr. Richard Davies, architect, Bangor, by Mr. Edward Edwards, builder, has been opened. The style of the building is Italian. The heating and ventilating has been specially cared for.

**Todmorden.**—A new Methodist chapel has been opened. The building is constructed of pitch-faced Yorkshire stone, with dressings of native stone. The fittings and woodwork are of pitch pine. The architect is Mr. Jesse Horsfall, of Todmorden, and the work has been carried out by local contractors.

### SCHOOL BUILDINGS.

**Kidderminster.**—New Baptist Sunday Schools have been opened at Kidderminster. The leading feature of the new school is the complete provision of classrooms. These run in two tiers round three sides of the quadrangle of the principal room, the upper set of classrooms having a gallery in front. Each classroom is walled off from its neighbour at the sides, but the glazed doors and partitions in front enable the whole of the classrooms to be commanded from the superintendent's desk. Complete privacy is secured for every class. The building has been erected by Mr. R. Thompson from the plans of Mr. G. Ingall, architect of Birmingham. The total cost is about 2,400*l.*



**Maryport.**—The foundation-stone of the new British School has been laid. The building throughout will be of red sandstone from the Netherhall quarries; the schoolroom will be 70 feet by 26 feet; and there will be three classrooms, each 22 feet 6 inches by 20 feet. Mr. Charles Eaglesfield, jun., of Maryport, is the architect. The following are the contractors for the different classes of work:—Messrs. McKenzie & Wilson, Maryport, mason-work; Mr. J. R. Banks, Maryport, joiner-work; Mr. Thomas Mandle, slating; Messrs. Hampson Bros., Wigton, plastering; Mr. Jonathan Gibson, Maryport, plumber's work; and Mr. J. Boyd, Cockermouth, painting and glazing.

### NEW BUILDINGS.

**The Shrewsbury Shirehall.**—The committee have received a report from Mr. Lockwood, showing the progress which has been made. The offices, with their fittings, have been completed and given up to the county, with the exception of the lower rooms and the communication with the courts and buildings in the rear, but the doorways leading thereto had been temporarily walled up, and would not be opened until the new buildings in course of erection behind were completed. The alterations to the premises to be used as new constabulary offices had been proceeded with as rapidly as possibly under the circumstances, but considerable delay had been occasioned by the unsatisfactory state of a portion of the main wall of the old County Court Offices, which had to be taken down and rebuilt. He anticipated, however, that the new premises might be ready for occupation in about six weeks' time. The works forming the foundation of the buildings in the rear of the courts had been proceeded with as quickly as the character of the ground would admit of, the close proximity of the old buildings behind rendering it necessary for the excavations to be carried out in small portions and with the greatest care, in order to prevent disturbance to the foundations of the adjoining premises. There had been no settlement or displacement of the old buildings owing to the great care and vigilance exercised by the clerk of the works and contractor's foreman, who had been very attentive to their duties in this particular. The work done throughout had been of a good and substantial character.

**Pontefract.**—The foundation-stone has been laid of a new vicarage-house in Mount Street, Tanshelf, Pontefract. The entire cost of the structure will be 2,100*l.*, exclusive of the site. The architect is Mr. Asahel P. Bell, of Manchester, and the builder Mr. Henry Gundell, of Pontefract.

**Tunstall.**—At a special meeting of the Tunstall Local Board, the Town Surveyor submitted plans for a conversion of part of the Market Hall into a new Town Hall and Public Offices, the cost of carrying out which was estimated at about 12,000*l.* Subsequently the Council approved of the plans submitted.

### ENGINEERING WORKS.

**The Forth Bridge.**—There has just been completed on the island of Inchgarvie, the spot where the central piers of the Forth Bridge structure are to rest, a wind gauge for the purpose of indicating the lateral pressure of the force of the wind from east to west. The erection is composed of an enormous mass of heavy timber—about fifty tons in all—which is placed upon the square tower and upwards of the old castle on the island. The top of the erection is about 100 feet above high-water level, and the apparatus upon which the wind exerts its force is a large flat screen of thick planks. This screen exposes to the wind about 200 square feet of a surface, and is mounted on small roller-wheels moving on iron rails parallel to each other. At each corner, and on both sides, are placed strong spiral springs resembling in some degree the buffer-springs of locomotives. On the east side of the screen are fixed steel wire conductors, by which the wind pressure is led to the indicator below. The apparatus is now in good working order, and the highest pressure registered since the erection is only one-fourth of the strain which the bridge is calculated to stand.

**Dover Harbour.**—The Bill which the Dover Harbour Board are endeavouring to obtain during the present session of Parliament for the construction of a deep-sea harbour at Dover is very comprehensive in its character, and practically aims at carrying out the scheme reported upon and approved by a Parliamentary committee some six years ago. The present Government pier, the Admiralty pier, will form the western arm of the harbour, and according to the plans it is proposed to lengthen this by extending it eastward for a distance of 550 feet. The eastward limit of the harbour will be formed by a pier or breakwater running out from under the cliffs beyond the Castle to a distance extending in a southward direction for about 1,000 feet, the space between the two piers being thus about a mile. Both these piers will converge slightly, and between them, marking off the entire limits of the harbour, will be a large breakwater. This breakwater will begin in the bed of the sea about 800 feet from the termination of the

eastern arm of the harbour, and extend in a southerly direction for about 1,200 feet, continuing in a south-westerly direction for about 2,100 feet to within 600 feet of the western arm. Provision is therefore made for two outlets of 600 and 800 feet respectively. The harbour will thus enclose nearly the whole of the bay which is sheltered by the cliffs, and is overlooked by the fortifications at the heights and the Castle.

### GENERAL.

**Mr. F. Holl, A.R.A.**, has accepted a commission to paint a portrait of Mr. Bright, which is to be presented by his constituents. A replica of it is to be placed in the Birmingham Art Gallery.

**Sir William Armstrong** has given 5,000*l.* towards the completion of two wings and corridors in connection with the new Natural History Museum at Newcastle; and Lady Armstrong has subscribed 1,000*l.* towards the general building fund.

**Mr. Jackson, Architect**, has been commissioned to design a new roof for the interesting old Moot Hall at Elstow.

**Mr. Robert Ferguson** has been elected to the professorship of Civil Engineering in Trinity College, Dublin, in succession to the late Mr. Samuel Downing.

**Mr. Cyril W. Herbert**, the youngest son of Mr. J. R. Herbert, R.A., died on the 2nd inst., of peritonitis, after an illness of a few days, at the age of thirty-four. He was curator of the Antique Room at the Royal Academy.

**Mr. E. C. Robins**, will deliver an address on "The Work of the Sanitary Institute of Great Britain" at the anniversary meeting of the Institute on Thursday next.

**Mr. George Eaton** has been appointed Borough Surveyor of Crewe.

**The Bideford Local Board** have elected Mr. Gent, builder, as Borough Surveyor.

**The London and Middlesex Archæological Society** propose visiting the ruins of the Roman city of Silchester on the 13th inst.

**The Annual Congress** of the Cambrian Archæological Society is to be opened at Llanrwst on Monday, the 31st inst. Among the objects to be visited are the inscribed stones at Pentrevoelas, Penmachno, and Guytherin; effigies and brasses at Bettws-y-coed, Ysptyt Evan, and Llanrwst Church. The opening of a tumulus at Llangerniew will also take place.

**The National Gallery** of Scotland has a fund which amounts to about 42,000*l.*, and which can be applied by the Trustees to the purchase of objects calculated to aid education in the Fine Arts.

**A Marble Statue** of the late Charles Darwin will (if the Trustees approve) be placed in the large hall of the Natural History Museum at South Kensington.

**The Dublin Corporation** have elected Mr. D. T. Walsh and Mr. W. Butler to be building surveyors under the Public Health Act. There were ten candidates. Notice was, however, given by one of the aldermen that he should oppose the confirmation of the appointment on the ground that the bye-laws had not been complied with in the election.

**A New High Altar** was on Sunday last consecrated at Cleland, Lanarkshire, by Archbishop Eyre. The sculptor is Mr. O'Neill, of Dublin, and the cost was raised by the Irish inhabitants of the district.

**The Prizes** in the competition for the new building for the German Parliament have been awarded to M. Wallot, of Frankfurt, and Thiersch, of Munich. They win 750*l.* each. Three prizes of 500*l.* each were won by Berlin architects. There were over 150 competitors.

**The Plans of Messrs. Littlewood & Capon**, of Bedford Square, London, have been adopted for the erection of chapel, lych-gate, mortuary, and necessary outbuildings, at the new cemetery, Leighton Buzzard.

**The Tunstall Local Board** have finally adopted designs for new public offices as prepared by Mr. A. R. Wood, architect, of Tunstall. The work comprises offices, court-room, board-room, and a rearrangement of the covered market, at an estimated cost of 12,000*l.*

**The Metropolitan Board of Works** are prepared to receive on the 11th inst., at the Bank of England, sealed tenders for 1,650,000*l.* of Three per Cent. Metropolitan Consolidated Stock. The money is required for street improvements, artisans' dwellings, main-drainage extensions, Fire Brigade stations and plant, and other new works; also for loans to the School Board for London, the managers of the Metropolitan Asylums District, and Boards of Guardians in the metropolis.



# The Architect.

## THE RESULT OF THE GLASGOW COMPETITION.



**D**ROVOKING as competitions always are to perhaps ninety-nine out of a hundred, and good reason as there may be for the provocation, there is one act of generosity in which every one may combine at last with satisfaction, namely, in congratulating the winner, and this especially when the prize is a good one. The great contest for the Glasgow Municipal Buildings has resulted in the selection of Mr. WILLIAM YOUNG, of London, an architect already well known by means of several exceedingly clever country and London mansions built from his designs, which have from time to time appeared amongst the illustrations of the professional journals; and assuming as we may do that the work now so successful is of equal merit with that which he has done before, we have no hesitation in inviting our readers to congratulate Mr. YOUNG most cordially upon his victory.

One particularly good reason for this, as all patriotic persons must agree, is the happy circumstance that Mr. YOUNG is a Scotchman; nay, there is even a better reason still, for he is a Glasgow man; and if the Glasgow architects—not one of whom, we believe, was fortunate enough to win a place amongst Mr. BARRY and Mr. CARRICK's selected ten—can see their way to take the matter patriotically, by claiming Mr. YOUNG for a fellow-townsmen and resolving to rally round him in that character, we venture to think it would be both good taste and good policy. All the world over blood is thicker than water, and with Scottish blood we have always been accustomed to think this is so more than ordinarily.

Until we are permitted to see Mr. YOUNG's design it is impossible to form any adequate opinion of its merits, and it is unnecessary to add that the report of a local newspaper such as we reproduced last week, however fluent it may be, is of no more service to the architect than to any one else in the description of what seems to be a somewhat intricate composition; but we observe in the printed particulars attached to the design at least two things which will be deemed worthy of the heartfelt approbation of all persons experienced in the art and science of winning an architectural competition, showing that SAM SLICK's "soft sawder and human natur" are still delightfully to the fore as much as ever. In the first place, the author is exceedingly careful to point out that he has adhered as closely as possible to the disposition of Mr. CARRICK's approximate plans; in the second place, he with equal care conveys the information that he himself is Glasgow-bred. He "has considered it best to adhere" to Mr. CARRICK's plan because of the "great amount of study" which the Town Surveyor has evidently bestowed upon it; and [if any cynical competitor should still be of opinion, as many are, that the plan was a remarkably crude and unpolished production, our answer shall be that the ingenuity must be all the greater which has succeeded in licking such a specimen anyhow into passable shape. Again, in the matter of the "elevations," when the designer's great object is explained to have been the production of something that should be not only "worthy of the second city in the Empire," but inspired by reminiscences of his own "early studies in Glasgow," if adepts in competitioneering should allow themselves perhaps to smile, we prefer to wait, in the expectation that, like Mr. YOUNG's plan, his artistic design also will prove to be all the more meritorious for the self-denial which has been involved in the recognition of Glasgow as the headquarters of modern classicism. There are spots, however, even in the sun; and if Mr. YOUNG had assumed a more independent attitude he might have only lost his chance for his pains. Some of our readers may remember the great competition for barracks which took place about twenty years ago, when all the world architectural were earnestly invited to improve to the utmost upon the old arrangements of the Royal Engineers. How was the competition won? Of the two first premiated plans, one was, as nearly as the designer dared, an exact reproduction of

the same old story; while in the other the reproduction was actually carried even farther, as far as the conservation, for instance, without a blush, of that most primitive of all "sanitary appliances" which decency forbids us to describe further than by the name of "the tub." If competitors are to be denied such harmless cajolery, then human nature must change indeed. The only architect of eminence just now who professes to have won his way to fame by means of competition absolutely devoid of all manifestation of frailty, our very estimable friend, Mr. EWAN CHRISTIAN, may, for what we know, pull a face at these artifices; but all we can say is that, if there were even a good deal more of such finesse than we consider to be likely, we are still prepared, as the world goes, to support Mr. YOUNG, and to join him heartily in what seems to be the culmination of his strategy, which he thus uncompromisingly describes:—"The group over the apex of the (principal) pediment represents TRUTH, as the guardian angel of Glasgow, accompanied by RICHES and HONOUR, presenting the city with its motto, LET GLASGOW FLOURISH!" It is clear, at any rate, that Mr. YOUNG has not had the privilege of being a shareholder in a certain Bank.

Truly grand architectural art, it will be said, stands proudly independent of all such rhetorical byplay; but it does not follow that the presence of such pleasantries indicates any artistic sacrifice, and we will say at once that we do not suppose Mr. BARRY has been in the slightest degree influenced by anything apart from a conscientious estimation of the architectural work pure and simple. The result which has at length been arrived at will be regarded by him, no doubt, as a great triumph. A sanguine correspondent of our own, a few weeks ago, pronounced him to be the hope of the profession, or the safeguard of its prosperity, or whatever else the phrase might have been, meaning that he was the great Protector of Competition; and we certainly must offer him our felicitations upon the success of his system in the present leading case. Not only does it seem to be the fact here—as it most frequently is—that one design stands out prominently before all the rest, but when the anonymous author turns out to be a man who has already made his mark, one who is also a Scotchman by birth, and one who is indeed a Glasgow man by education, it must be admitted that better fortune could not possibly have befallen, and many will say the probability now is that nothing more will be wanted to establish for the next twenty years the double competition scheme, with its professional adjudication, as a fixed institution throughout Great Britain, perhaps America, possibly France and Germany. The bugbear of the system—the idea of the "insuperable obstacle" to the acceptance of a first prizeman after his name is disclosed—which, it will be remembered, Mr. BARRY a few weeks ago pronounced to have been virtually surrendered beforehand by his clients at Glasgow—has been proved to all appearance to be but a form. The theory now to be adopted will be that the chances of success on the part of ineligible competitors are always very small, and that the first place, at least in any contest of a high class, is sure to be taken by a high-class man. Instances to the contrary (which may come up very shortly) will probably be ignored as accidents, or taken as exceptions which prove the rule. And as it is certainly correct to say that the higher the order of merit involved, the more likely it is that able and experienced architects may be induced to enter the lists, so also, it may be, the greater the difficulty of the problem, the greater will be the probability that the very best solution can only be the work of one of the ablest and most experienced of all.

But let this not be overlooked: a result of such a kind is by no means the same thing that the advocates of public competition *à outrance* are contending for. What they want to bring about is the success, not of the known and established man, but of the unestablished and unknown. Their grand ideal of a competition is a contest that brings to the very front of the profession, at one romantic leap, some "young man" (the very phraseology is stereotyped in their arguments) "who otherwise would have no hope of getting on." Let it not be forgotten that this is not the result of the Glasgow contest, and that, if it had been, the "insuperable obstacle" would to a certainty loom up with all its horrors.

This "insuperable obstacle," by the way, is no new thing; even as the double competition itself, and the professional adjudication, are no new things. Indeed there can be nothing new in this process anywhere until the reservation of a right to supersede a first prizeman shall be definitely sur-



rendered. Such an act of self-protection at the discretion of the promoters has been the most prominent of all incidents connected with architectural competitions from time immemorial. Indeed there have been comparatively few first prizemen during the last fifty years who have not been set aside; in other words, it is the chief practical grievance amongst professed competition-men that when they have fairly won they are not fairly entrusted with the work. Their design is delighted in as supremely perfect up to the moment of opening the sealed envelope; half an hour afterwards it is complacently overturned, and one which was pronounced "infinitely inferior" to it is preferred for execution because its author is a known man!

It is probable that we shall have more to say upon the result of the Glasgow competition. Dissatisfaction must be expected, and controversy not a little. There is only one circumstance which we need allude to in this connection at present. We are informed that the architects of Glasgow are annoyed at the "secrecy" which has characterised the transaction throughout and is still maintained. They have requested the Town Council to authorise an exhibition of all the designs, and this has been refused. It has been pretty well determined that an exhibition shall nevertheless be held. We cannot but regret that there should be any controversy on this point. Considering that what we may safely call a good many thousand pounds has unquestionably been expended in hard cash by the architects of England and Scotland in the preparation of designs for the choice of the Town Council and their advisers, it may certainly be thought hard that "secrecy" should be so greatly relied upon. Much may no doubt be said on both sides of the question, but after all this fact remains—that secrecy is a thing which is nowadays discountenanced amongst us in all public business on principle, and that unlimited publicity is deemed the safeguard of all justice. If Mr. YOUNG's design is as supremely good as it is declared to be by the LORD PROVOST, why object to an exhibition? If we may say one word more, it shall be this:—If, as Mr. BARRY and Mr. CARRICK report, the sketch "Viola" was as conspicuously the best as the finished design, why should the second competition be necessary?

#### THE CHURCHES OF CHARENTE.\*

WE have already described the circumstances to which the publication of the memorial volume on the domed churches of Charente is owing, and we now propose to notice the buildings which are illustrated on the pages. Thirty years ago Professor DONALDSON read a paper on Gallo-Byzantine churches in France, in which he said that in the central provinces there were buildings distinguished from others belonging to Christians by the use made of the cupola, that they were without root in the country, isolated in the national taste, and appeared to reveal clearly and incontestibly an Eastern origin. In those days people were accustomed to draw a hard-and-fast and very definite line between architectural styles and periods, as if there were a certain number of absolutely new creations in the art of the builder. But since then more has become known about the relations between architectural forms, and it would now be hazardous to assert that a type of building which seems to be unique is isolated or rootless. The inventive powers of men are limited, and inquiry generally shows that originality is but another word for adaptability. The so-called Gallo-Byzantine churches, instead of being isolated, might rather be said to be connected with Roman buildings on the one hand, and with Gothic buildings on the other.

It is not uncommon for geologists to dispute about the formations under which the rocks of a district are to be included where there is overlapping, and in consequence geological maps are always undergoing transformation. The peculiarities which give character to the beds can be interpreted in more ways than one, and therefore it is impossible to arrive at certainty. The Charente churches can in the same way be claimed as having affinity to different styles. They have many features in common with buildings that are said to be Roman and Classic. The round arches, domes, mouldings,

the massiveness of the masonry, the indifference to ornamentation in the interiors, and the attention given to symmetry, are suggestive of Rome, however debased may be the details. It would be quite fair to include the churches in any history of Classic architecture which professed to be exhaustive, and did not exempt the corruptions of the style. With no less probability they might be claimed by the historian of Gothic art. Many things which are accepted as being essentially Gothic are represented in them. The use of the pointed arch would by itself be sufficient with some to constitute them Gothic. The richness of ornamentation on several west fronts, and the capacious portals with their numerous orders, can only find counterparts in mediæval churches. The arcading is Gothic, and so is most of the ornament. This diversity of character gives so much fascination to the buildings that it is surprising they have not hitherto secured more attention from investigators.

As happens elsewhere, the history of the buildings is in a great measure a blank. It is believed that in the ancient province of Angoumois, which is now the department of Charente, during the twelfth century there was (to use the Archbishop of YORK's phrase) "a paroxysm of building churches." Many of them have survived, and they are interesting whether they are considered one by one or in groups. There is a strong family likeness between them. If we study the typical plans which are shown in the volume we find that the churches were generally cruciform, but without aisles. Out of eleven examples, one (Cellefrouin) has aisles, and another (St. Michel d'Etraigues) is an octagon on plan. Sometimes the nave is covered with barrel vaulting, sometimes with three or four low domes—one being at the crossing of the nave and transepts. The builders were no more inspired by the true Gothic spirit than was Sir CHRISTOPHER WREN, for the domes are masked on the outside by structures of a different kind. Preference was given to a sort of spire in which the courses are made of stones which are cut in the form of scales, so that the whole resembles a fir-cone or pine-apple. Even more than the domes those spires might be taken as revealing an Eastern origin. The west fronts are also peculiar, and on them the twelfth-century sculptors were allowed to exercise their skill. There are three vertical divisions which are sometimes divided by shafts running through three or more storeys. The central division on the lower storey is the doorway, and the other arched divisions are introduced for the sake of symmetry. It is supposed that the west front marked the completion of the work, and became the memorial of the founder. On several of them representations, more or less imperfect, are found of a man on horseback, with another man lying on the ground. This has been interpreted as symbolising the relations between the *seigneur* and his serfs. In the period between the fifth and tenth centuries the feudal lord was possessed of great power, but servitude was accepted as a matter of course, and it was hardly requisite to suggest the consequences of rebellion to the church-goers. In the twelfth century, when the Charente churches were erected, there was an approach to freedom, and the villein was not then (if he ever were) in the condition of a prostrate animal that might be trampled upon with impunity.

To most people the interest of the Charente churches would be found in the construction of the domes. Many examples are given in the plates. The domes appear to have been used mainly for convenience, as by means of them the thrust was extended to four walls instead of two, as in the case of barrel-vaulting. On this subject, an extract from the lecture will suggest the character of the descriptions which accompany the illustrations in the Memorial volume:—

It is easy to make an accurate comparison of the pressures exerted by the domed vaults derived from the east with the pressures in the other forms referred to by M. VERNEILH, if we confine ourselves to the simplest forms of each—namely, the cases (1) of the barrel vault; (2) of the domical vault in which the pendentives and dome are parts of one and the same sphere, of which there are instances, as at Fléac; and (3) the quadripartite Romanesque vault, with semicircular cross springers; and on the assumption that in the three cases the compartments are square and equal to each other and ribless. It admits of easy geometrical proof that the surfaces in the case of the barrel and domical vaults would be exactly equal. But though the vertical weight (assuming identity in thickness and material) would therefore be the same in each case, the lateral thrust is very different. The horizontal pressure of the barrel vault pushes directly against the side walls, however much they may be weakened by arches or windows: the domical vault presses outwards in the direction of the diagonals of the square, and part is therefore counteracted by the thrust of the contiguous compartments or by the end walls, and the remainder

\* A Visit to the Domed Churches of Charente, France, by the Architectural Association. London, in the year 1875. Published as a memorial of Edward Sharpe. With an historical and descriptive text, illustrated by sixty photo-lithographed plates.



admits of being provided for by special buttresses or piers. Moreover, the centre of gravity is at a greater height above the springing, and the pressure is therefore in itself more vertical. The egg-shaped figure of the dome is also much stiffer than that of the barrel vault, more self-coherent, and may therefore be built of much thinner masonry. If compared with the compartment covered with the quadripartite vault, the domical surface would be the heaviest in the proportion of 3'1416 to 2'2832, or about 11 to 8, but the advantage of the higher centre of gravity and of the egg-shaped stiffness of figure would still remain in favour of the domical surface. When the dome, as in the majority of instances in France, is formed of a smaller sphere than that which belongs to the pendentives, the surface is a little in excess of the barrel, but the other advantages are not in the least delivered.

The soffites of the domes are dressed plain, for in no case do we find coffers, or other attempts at variety of surface. The exterior was commonly left rough, but in one instance (Trois Palis) "the tops of the domes externally are worked to an even face, as though they had been intended to be seen externally." It was the rule to make the domes circular on plan, but at Mouthiers one is found slightly elliptical, and at Cellefrouin the plan appears to be an octagon. The church of St. Amand de Boixe has many interesting features. It is the only example of a dome with ribs. While in "most of the domes derived from Périgueux the cornice band which terminates the pendentives and starts the dome rests upon the extrados of the arches of the crossing," at St. Amand de Boixe "the pendentives are carried up about three courses unbroken. Then there is a drum with a continuous arcade all round of twelve arches, which are pierced for windows."

The Charente domes cannot be considered to be remarkable examples of scientific construction, but they answered the purposes intended by the builders, and, unlike many kinds of roofs, have survived for twelve centuries. The mason's difficulties were mostly in working the pendentives, and in some of the churches the contours appear to have been "fudged" in order to effect a slightly junction between the arches and the domes. Pointed arches are used sometimes for the sake of convenience, and the builders do not appear to have been aware that there was any incongruity in the coexistence of pointed and semicircular arches in the same building. We have said that aisles are uncommon in Charente. There is one interesting example at Cellefrouin, where the crown of the vaults in the aisles is at the same level with the vault of the nave. To accomplish this the springing in the aisles is at a much higher level. It is remarkable that, although the builders were able to construct vaults and arches with readiness, no niches or recesses for images are to be found in the churches. The sculpture on the exterior seems to be attached to the building, as there is so little provision for it. At Trois Palis the figure of CHRIST and the evangelistic beasts are found within square recesses, which may have been formed by the men who constructed the magnificent porch of Chalais.

The ornamentation of the churches is conventional, but it is not so pleasing as the work of a later time. The Charente carvers might never have seen a flower growing or a live animal; everything is twisted regardless of natural proportions, or probability. The most elaborate example of the style is to be seen at St. Amand de Boixe.

Among the plates which illustrate the memorial volume are many which are as good as can be desired. The geometrical drawings, the details of ornament, and the sketches of the west fronts are most creditable to the authors. Some of the interior perspectives want vigour, but taken as a whole the Association may feel proud of the work of its representatives. The volume has been printed and bound in a manner that is rarely surpassed.

## ROYAL ACADEMY ARCHITECTURAL SCHOOL.

THE following students have been admitted to the Architectural School:—T. J. Dalziel, J. C. Hambling, C. E. Holmes, C. P. Leach, H. W. K. Martin, E. W. Smith, E. A. Woodrow. *Lower School*—J. H. Ball, D. W. Bellhouse, W. D. Caröl, B.A., H. O. Cresswell, W. J. Gargery, F. Johnson, F. L. Lee, E. S. Norton, P. J. Popplewell, J. G. Sankey, H. A. Satchell, W. C. Rea, F. H. Tulloch, A. F. Vigers, G. G. Wallace, G. W. Ward, W. H. Woodroffe, E. Woodthorpe, B.A. *Probationers*—F. S. Capon, E. Crisp, C. D. Fitzroy, A. Forrester, W. J. Gibbon, J. J. Muller, F. P. Oakley, S. B. Russell, J. E. Sears, J. Thomson, W. R. A. G. Tucker, W. F. Young.

## THE ART OF THE BLACKSMITH.\*

By G. H. BIRCH, A.R.I.B.A.

(Continued from page 20.)

THE next era during which the smith's art seems to have arrived at a culminating point is the thirteenth century. We have an immense number of examples, nor have we to go far to find them—they are as well represented in England as on the Continent. The idea is much the same as in the preceding century, only the scrolls are easier in their curves, the foliations more general, and the woodwork almost entirely covered. In the cloisters of St. George's Chapel, Windsor, is a nearly perfect example: the door occurs in Henry III.'s work, some very beautiful wall arcading still remaining in juxtaposition. The door itself is of more recent date, probably Edward IV.'s time, but the iron-work has belonged to an earlier door. It can scarcely be called a hinge, it is more correctly a covering of metal-work, and although mutilated in parts, the design is exceedingly beautiful. Each leaf of the door has three pointed ovals, known technically as the "vesica" shape; these are intersected in the centre perpendicularly by a bar of iron, and from this and the vesicæ spring very beautiful curves, filling up the whole interstices. The sides and arched top have an outer containing line of iron, from which spring little buds of foliage at intervals; the lower vesicæ are now imperfect, having one-third cut off, and the top containing line on the left is wanting. Between the first and second panels are two pierced circular discs with rings for handles, seemingly of later date; the intersecting bar is not continuous, but terminates, close to the point of each oval, with an embossed rosette, thickly studded with small nails to attach it to the wood-work, and with heads, bosses, and leaves at intervals. At York Minster there are splendid specimens of metal-work on two cope chests; these chests are of the shape of a quadrant of a circle, so as to obviate folding the cope, often stiff with gold embroidery. The lids open in the centre more than once, and the hinges with their scrolls cover the whole surface; the design and execution of the work being similar to the previous example. At Chester Cathedral there is an upright vestment press in the sacristy, opening in three divisions and one subdivision; but in this case, as at Windsor, the ironwork is more as a protection than as a hinge, for the hinges are separate, being only small straps of metal and not connected with the scrolls. The design is irregular, the centre division having a perpendicular line from which spring five scrolls on each side, with floriated ends; the left-hand division has one bold scroll in three curves, and the right-hand division opens in two subdivisions, each having a horizontal bar in the centre, with scrolls springing from each side, but reversed, the lower being the boldest; the centre and right have containing lines on each side, but none at the top or bottom. This example at Chester Cathedral is a very beautiful one, and not so much known as it should be, or as it deserves. At Ripon Cathedral there is also another vestment press, but the hinges are plain strap hinges with a stiff conventional series of curves on each side, more curious perhaps than beautiful. The handle is a simple circular disc with punched holes round the outer circumference, and a drop ring handle. Ripon Cathedral possesses also some very good hinges on the south door of the choir, which may be twelfth century, but if not, are certainly thirteenth century, and they have no back straps.

Eaton Bray Church presents, on the south door, a very fine specimen of early metal-work. Here the door is again covered with the scrolls diverging from three strap hinges reaching quite across the door, the apex of the arched head being also filled with scroll-work; portions of the bands are also ornamented with engraved work; the leaves and rosettes are punched. The ring and plate are perfect. This specimen is in a very good state of preservation, only some of the scrolls at the bottom being imperfect. In the same church is another hinge of more simple character, but of a very quaint design, and possessing the peculiarity of being alike on both the inner and outer sides of the door. In the Cathedral Close at Norwich there are the remains of a beautiful specimen of iron-work covering one of the doors, but it is in a sadly mutilated condition, the upper hinge being the only one perfect; this has an outer iron band following the outline of the door, though only one portion remains, and between the two hinges is a horizontal bar starting from a central raised boss from which hangs the handle; the ends of the bar being floriated.

The examples enumerated here are only a few amongst many, a detailed description becoming monotonous, for they all more or less follow one general arrangement. The French examples differ slightly in treatment, but there the strap is rather broader and does not branch out into scrolls until it reaches more than half across the door: the scrolls are shorter and the foliage richer than in the English examples, and the scrolls do not bear the same proportion to the strap. A very good hinge is still to be seen on the north door of Rouen Cathedral, Portes de Calendriers, and at Noyon Cathedral on the door of the staircase leading to the treasury. But hinges were not the only things upon which the smith of the Middle Ages

\* A paper read at the special visit of the Architectural Association to Messrs. Gardner's, West Strand.



exerted his skill and ingenuity. The grilles which protected the tombs in the interior of churches and the openings in screens demanded alike the exercise of both, and at Westminster Abbey there is still preserved and replaced *in situ*, after having been for many years thrown by on one side amongst useless lumber, a specimen which any age or any clime might justly be proud of. Around the shrine of Edward the Confessor repose many of his successors, and this chapel and shrine was exceedingly rich in costly gifts, silver, gold, and jewels being there in great abundance. Originally the only entrance to the chapel was through the doors in the screen forming the reredos of the high altar, and though considerably elevated above the level of the pavement of the surrounding aisle, it was not sufficiently secure to protect its precious contents, and there must have been some screen or railing. At the close of the thirteenth century the only royal tombs besides that of the royal founder, Henry III., was that of his daughter-in-law, Eleanor of Castille. Henry's tomb was of a good height, but Eleanor's was not so lofty, and there was the dread of robbers making free with the offerings to the shrine, as they had done only a short time previously with the treasure which the king had amassed for his Scotch wars, and which was stolen from the treasury in the cloisters hard by. A grille of very beautiful workmanship was accordingly placed on the north side of the tomb towards the aisle, the top of the grille being finished with a formidable row of spikes, or "cheveux de frise," as we now term them, completely guarding the chapel on that side. The framework of forged bars projects from the tomb in a curve, and on the front of these bars is riveted some exquisite scroll-work. It is difficult to describe in detail this art treasure—a photograph only could do it justice; the wonderful energy and beauty and infinite variety thrown into the little heads of animals which hold the transverse bars in their mouths, and the beauty of the leaves and rosettes, scarcely two of which are alike, are things which must be seen to be appreciated. On the score of anything very beautiful attributed to foreigners, this ironwork, like the beautiful effigy of the queen whose tomb it guards, has been attributed to French or Italian influence; and the English Torell, who moulded and cast the bronze effigy, has been Italianised into Torelli, a name which he never bore in his lifetime. With regard to its being French, France has now nothing existing resembling it in the slightest degree; while the work in the cloister at St. George's Chapel, Windsor, before referred to, does resemble it slightly in some points.

A very beautiful grille exists at Canterbury Cathedral, screening St. Anselm's Chapel from the south aisle and the tomb of Archbishop Meopham. This grille does remind one of Italian or foreign work, but there is every reason to believe it to be English; its great characteristic is its extreme lightness, for it is formed of a series of double scrolls only  $\frac{1}{2}$  inch wide by  $\frac{1}{2}$  inch in thickness,  $7\frac{1}{2}$  inches high and  $3\frac{3}{4}$  inches broad, placed back to back and fastened together and to the contiguous scrolls by small fillets or ribands of iron wound round; these being fixed into iron frames 6 feet 6 inches high by about 2 feet 10 inches broad. This extreme lightness makes it resemble the foreign examples.

Reverting again to a hinge, omission has been made of a very beautiful one now on the door of the hall of Merton College, Oxford, the *motif* of which is certainly earlier than the possible foundation of the college by Walter de Merton, and even earlier than his first foundation at Maldon, which he afterwards moved to Oxford. He was the earliest real founder of a college in that classic city, for Alfred the Great and his supposed foundation of University College must be considered as a myth. This hinge is remarkable for its bold and vigorous treatment, its leading lines and curves being very pronounced, with the scrolls and foliage kept subordinate. The handle is modern, the two ends next the ring terminating in grotesque heads of animals. There is a peculiarity worth noticing in this hinge, and that is that the scrolls do not flow gracefully out of the curves and bars, but seem to be forged on afterwards—the point of junction, which is marked with a little fillet, being very abrupt.

During the fourteenth century the smith found plenty of employment; the hinges, though not quite so elaborate as in the preceding era, were universal as to their use, but instead of the leaves and rosettes as used in the previous century, we find the ends beaten out flatter, and sometimes cut in the conventional form of a leaf, but more frequently of a *fleur-de-lis*. Howden Church possesses one of the best examples, and in the upper part of this too is an additional pattern formed of two interlacing squares, one set diagonally, the ends having *fleur-de-lis*, and in the centre of these figures is a cruciform pattern of four *fleur-de-lis* joined at their bases.

In Germany this leaf termination was almost general. Marburg, Magdeburg, Treysa, Nieukirchen, Meissen, Eschwege, and the Rhine Provinces have numerous examples, but they lack the beauty of the English and French examples—the straps are thin and spidery and the curves abrupt and often repeated; while with us it is only one case in ten that the upper curve resembles the lower. The collegiate church of St. Elizabeth, Marburg, has a very good example, and Erfurt Cathedral also; but in the mechanism of locks, bolts, fastenings, and door-handles they were far in advance of us, and these are invariably very quaint and full of vigour.

During the fourteenth century Italy was renowned for its smith's work, especially in grilles and railings and in articles of domestic use, but this deserves a special paper, and time will not allow this branch of the subject to be dealt with here.

Icklinworth, in Suffolk, possess a fine parish chest which is covered with ironwork; the hinges and straps are elaborately engraved, and although the chest is only 5 feet 9 inches long, by 1 foot 4 inches deep and 1 foot 10 inches broad, there are five hinges, with scrolls covering the intervening spaces and ends, and a rim of metal surrounds the edges, with rings attached on the front near the two ends. This might have been a vestment chest, as it is a little too early for parish chests.

During the next two centuries the prominence hitherto given to the hinge sensibly declined. Partly from the reason that it had become the fashion to make more of the wood-work and to enrich it with carving or moulding, the hinge now played a very secondary part, and in some cases it was simply a band of metal passing behind the perpendicular mouldings of the door, and terminating in a *fleur-de-lis*; but the door was also thickly studded with nail-heads. In the screenwork and grilles of this period of the fifteenth century a like decadence was manifest. The tombs of the great still required grilles to protect them, but the designs of these were generally stiff and poor. The screen of Henry V.'s chantry at Westminster is typical of this, and its very proximity to the grille of Queen Eleanor's tomb makes this decadence the more apparent; but while the hinge and grille decreased in beauty, more attention was paid to locks, fastenings, and door handles—many of these being very beautiful. There is a very excellent example of a lock at Ely Cathedral, and at Bedington Hall, near Croydon, and in many other places. The railings round the tombs of Edward the Black Prince, Canterbury Cathedral, and Henry IV., and that round the tomb of Simon de Langham, Archbishop of Canterbury, in the chapel of St. Benedict, Westminster Abbey—very similar to the two first-mentioned tombs—make up in strength what they lack in beauty, and seem to have been the prototypes of those miles and miles of iron railings with which we are so familiar in London.

At Arundel Church, Sussex, there is a light and graceful iron grille in the blocked chancel arch; the design consists of upright standards and cross bars and small cusped arching between, and a battlemented cornice enriched with alternate roses and lions' heads. It is much to be regretted that the full beauty of this elegant grille cannot be properly appreciated in consequence of the ugly brick wall which the Duke of Norfolk has caused to be built immediately behind it, in order to enforce his legal rights to the chancel. The very existence of this grille testifies that whatever those legal rights may be, the parishioners, although debarred the use of the chancel, were certainly not debarred the sight of it through this grille; nor was the effect of a beautiful interior ruined by such an act of vandalism, worthy of the worst days of those Puritans who divided Exeter Cathedral with a brick wall between the nave and choir. Extremes very often meet.

In Germany the open grilles of this period were of excellent design and workmanship. One very common form which they assumed was that of a cross-barred grille, with a delicate pattern occurring at intervals of a cusped form; sometimes the bars were set diagonally. There is an infinite variety of form of grille throughout Germany. Louvain, in the church of St. Peter, has some excellent examples, and in the same church is an aumbry with simple but finely-designed hinges, hock-plates, and handles. These aumbries, of which there are a great many in Belgium and Germany, deserve a very close inspection, in consequence of the extreme beauty of their metal-work. In South Kensington Museum there is a very perfect carved oak one, called German, but more properly Flemish. The metal-work on this is very original. In England we have but few examples, but there is a very good one in the church of St. Mary, Richmond, Yorkshire. Nuremberg and Augsburg were the two chief places where this art was carried on. These two cities were then at the zenith of their prosperity, and their trade uninjured by those devastating wars which reduced them to misery, and from which Augsburg at least never fully recovered.

There is one particular phase of the smith's art in England which deserves more than a passing notice. The great impetus given to the industrial arts by the universal rebuilding which took place after the great fire of London exercised a considerable influence on the art of the smith; and there is the peculiarity attaching to the revival, that the productions are essentially English, and are unlike the contemporary work on the Continent, preserving an individuality perfectly marked and distinct; one might almost call it a "school," and it lasted for nearly a hundred years.

St. Paul's Cathedral, which was commenced in 1675, and the choir so far completed that it was opened for service in 1697, possesses some of the finest specimens of this date in the grilles and gates enclosing the choir, and although one is bound to confess that it was to a foreigner and not to a native artist that these are due, yet in many particulars they resemble genuine English work; one has but to compare these gates with others of the same date in France, to directly see the immense difference between them, as in the enclosures of the choir of the Abbey



Church of St. Quen at Rouen, and at the cathedral at Amiens. The artist's name was Tijau or Tijou, for the orthography is doubtful. In addition to these large gates, the original positions of which have been altered since the re-arrangement of the Cathedral, there are several smaller grilles in some of the openings and escutcheons to some of the internal gates with the arms of the Dean and Chapter very beautifully worked into the design; the whole of the ironwork at St. Paul's deserves a close inspection. The outer railings, which are partly cast, are of Sussex iron, and were made at Lamberhurst.

Most of the City churches have very good ironwork, especially in the sword rests and communion rails, some of the finest of the former being at All Hallows Barking; St. Andrew, Undershaft; and St. Mary at Hill; and the latter at St. Mary, Woolnoth. The altars of some of these City churches are marble slabs supported on a frame of wrought ironwork. In the Church of St. Michael, Queenhythe, now destroyed, there was a very curious iron bracket,\* with pulley and chain for the font cover, and some wrought-iron hat rails. Though the hinges and locks of these churches are not remarkable, many of the vanes are curious. St. Lawrence, Jewry, has a gridiron in allusion to the martyrdom of the saint. St. Mildred Poultry, and St. Michael, Queenhythe, both destroyed, bore ships in full sail; St. Peter's, Cornhill, the cross keys; St. Mary-le-Bow has a flying dragon; and St. Antholin, Budge Row, had a very fine vane surmounted by a crown. The destruction of this church and spire, one of the most beautiful in the City, will ever be a lasting disgrace to those who brought it about. In the church of St. Dionis Backchurch, at the west end, supporting the organ-gallery, stood square columns of open work of wrought iron, and with very nicely wrought caps, but the church has also been destroyed, and the pillars probably sold for old iron.† Some of the brass chandeliers, where they had not been made away with, to be replaced by gas standards or brackets, are suspended by ironwork more or less ornamented and gilded, a good specimen having existed at the church of St. Catherine Cree, and there is still one remaining at St. Saviour's, Southwark. At St. Alban's, Wood Street, a curious hour-glass is preserved in a wrought-iron frame, a relic of Puritan times; and though hour-glasses and their stands are not uncommon, it is a comparative rarity when found in a church of the date of St. Alban's, Wood Street.

The smith also found plenty of occupation in making railings and gates for public bodies and for private houses, and wrought-iron handrails to staircases.

One of the most beautiful specimens of the art of the seventeenth century is to be seen in a pair of gates at the end of a passage or hall in the building occupied by the Managers and Trustees of the Bridewell Hospital, Bridge Street, Blackfriars; the wrought leaves and scrolls are very rich, being designed for internal work, and date from very soon after the fire of London.

The Honourable and learned Societies of Gray's Inn and the Inner Temple have fine scroll entrance-gates to their respective gardens; and scattered about in the suburbs at Clapham, Chelsea, Fulham, Stoke Newington, Stratford-by-Bow, and Hampstead are fine entrance-gates, whose designs are doubtless very familiar, since there is scarcely an old brick mansion with red tiled roof, and dormer windows, and walled garden, that does not possess them. There is considerable beauty about these gates; the manner in which the upright standards are alternated with panels of scroll-work, and the upper part enriched with scrolls and leaves, and the initials of the owner or his arms worked in, some of this work indeed being very delicate and refined, especially with regard to the foliage. But the chief glory of the English school of this date is the wonderful work upon the gates, now preserved at Kensington Museum, formerly adorning the gardens at Hampton Court Palace, and the work of Huntingdon Shaw. These are far superior to the gates in St. Paul's Cathedral, for the latter are a little too architectural in their treatment, Corinthian pilasters being freely introduced; while these Hampton Court ones are free from any approach to architectural forms in iron, and rely for effect entirely upon the bold curves and sweeps of the scrolls, the richness of the acanthus-like foliage, and the delicacy of the centre medallions. The wreaths, which are suspended from the top, are wonderfully modelled, some of the flowers introduced being almost as delicate as the natural ones they represent, or rather reproduce, in iron; one medallion in particular, representing the rose of England surrounded by small buds and leaves, being truly exquisite. At the top of each of the gates are some fine masks, in some cases surrounded by foliage, and each gate is different in design, although they resemble one another in general form. South Kensington Museum possesses six of these gates—one with a rose, another with a thistle; this last one is superbly modelled, the peculiarity and bend of the leaf being accurately rendered. Another has the harp of Ireland, but with strings rent and broken, emblematic of the present state of that unhappy country; and three have the initials of William of Orange and Mary Stuart. If William's name in these days may not be quite so popular as it once was, and if he did but little for the country over which he

was called to govern by a dominant party, at least he was the means of calling into existence these exquisite works of art, which hold their own against any foreign production, and place the smith, Huntingdon Shaw, foremost among those who, working with stalwart arm, with anvil and hammer, were able to throw life and energy into the dull mass of metal before them.

In the staircase of a house in Lincoln's Inn Fields, at No. 35, there is a wonderful specimen of a wrought-iron staircase rail. At present this wrought work terminates at the first floor, but there is evidence of it having been continued to the second floor, a panel having been once sold at Christy's for 40*l.* which purported to have come from No. 35 Lincoln's Inn Fields, and had been removed in consequence of extensive alterations in the interior. The rail is composed of separate standards, with scrolls and leaves, until it reaches the landing, which sweeps round a circular well-hole; round this the standards cease, and are replaced by an extraordinarily fine panel, in which one can recognise the same hand as in Hampton Court gates. There is the same wonderfully-modelled mask with foliage proceeding from it, the same sort of wreath depending in advance of the other work, the rich acanthus foliage partly masking the boldly-designed scrolls beneath, betraying the hand of Huntingdon Shaw or his school. The date would also fit, for this house and the next are traditionally supposed to have been designed by Christopher Wren for the Solicitor and Attorney-Generals about 1695-96, the date of the Hampton Court work. The centre oval medallion of this panel has unfortunately gone, and is replaced by some initials in cast iron; but it probably contained some of those beautifully-modelled bunches of flowers which appear on the Hampton Court gates.

In concluding the paper Mr. Birch referred to the staircase ironwork of No. 5 Bloomsbury Square, the house of Isaac Disraeli, and to various other interesting examples scattered up and down London.

## THE GLASGOW INSTITUTE OF ARCHITECTS AND THE MUNICIPAL BUILDINGS COMPETITION.

A SPECIAL general meeting of the Institute was held in the chambers of Messrs. William and C. J. MacLean, Writers, 196 St. Vincent Street, on Tuesday; Mr. John Honeyman, F.R.I.B.A., President, occupied the chair.

Mr. William MacLean, the secretary, reported that the Council of the Institute had sent a letter to the Lord Provost as to the public exhibition of the designs for the new Municipal Buildings; that the Lord Provost had submitted this letter to the Municipal Buildings Committee of the Town Council, who have declined to carry out the suggestion that the designs should be publicly exhibited; that the Council of the Institute, having again considered the matter, resolved that steps should be taken to ascertain whether the competitors, or a majority of them, would wish their drawings to be exhibited; that accordingly a circular is in course of being sent to the secretaries of the various architectural societies throughout the country.

The President said he had no doubt that the refusal of the Town Council to exhibit the rejected designs along with the one which had been chosen would cause general dissatisfaction, not only among architects, but among all who took any interest in the proposed undertaking. Although the condition bearing on the point was somewhat obscure, the intention of the promoters, no doubt, was that there should be no public exhibition of designs until after the final award. Many competitors thought that there ought to have been such an exhibition before the final award—there was considerable diversity of opinion as to this, and there was room for such diversity; but he thought every one would agree that in all important competitions there ought to be an exhibition of the designs after the decision, if not before it. It was only what was due to the competitors, who of course had a laudable desire to show what they had achieved—how nearly they approached success, what they thought good or even best, whatever other people might think. It was due also to the public, who were really through their representatives the promoters of this competition, and many of whom took an intelligent interest in it, and wished to judge for themselves how many well-known local architects had borne themselves in the contest, and whether they were ignominiously defeated or not—and most naturally and properly so, although their town councillors seemed to be of a different opinion. The truth, was that a competition such as this, without an exhibition of all the designs, was like a race in which only the winner and none other should be visible. The idea that people were not interested in any but the winning design, or boat, or horse, or anything else, was simply monstrous. But such an exhibition of all the designs as the Institute had recommended was due to the Town Council and their advisers themselves. They were of course prepared to justify their selection, but they certainly would not inspire confidence in the wisdom of their decision by refusing to exhibit along with the chosen design those they had rejected. He did not say, because he did not believe, that they were afraid to exhibit all the designs together, but it was extremely difficult to imagine any valid reason for their refusal to do so. As

\* Now in the possession of Messrs. Gardner.

† These were fortunately not destroyed, and are in the possession of Messrs. Trollope.



they were aware, he was not a competitor himself, and he spoke dispassionately; but he must say that he regretted this refusal exceedingly, and all the more because up to this point the Council had acted in such a way as to merit the highest commendation, and the influence of their example would certainly be beneficial in the conduct of future competitions. In the circumstances their Institute seemed to be called upon to do what the Town Council ought to have done; and although the task of organisation was no light one, he was sure they might reckon on the approbation and hearty support of their fellow-citizens, and that the proposed exhibition would be highly interesting and instructive.

On the motion of Mr. Sellars, seconded by Mr. Bromhead, the meeting unanimously approved of the action of the Council of the Institute, and remitted to them to make the necessary arrangements for the proposed exhibition, provided in their opinion a sufficient number of the competitors are desirous of exhibiting their designs.

Some other business of a formal nature was transacted.

### THE NATIONAL GALLERY.

THE following pictures have been added to the National Gallery from the Hamilton Palace collection:—1, Henri de Bles, called Civetta (?), *St. Jerome*, with a lion near a cavern, and landscape beyond, 493*l.* 10*s.*; 2, Leonardo da Vinci, portrait of a gentleman, 525*l.*; 3, Tintoretto, *Christ Washing the Disciples' Feet*, 157*l.* 10*s.*; 4, Giorgione, *The Story of Myrrha*, 1,417*l.* 10*s.*; 5, Sandro Botticelli, *The Adoration of the Magi*, in a landscape, with procession of the kings and some pilgrims, 1,627*l.* 10*s.*; 6, Andrea Mantegna, a pair of upright panels, painted with figures of Summer and Autumn in monochrome, 1,785*l.*; 7, Sandro Botticelli, *The Assumption of the Virgin*, the large gallery picture with numerous figures in circular rows in the sky, and landscape below, with figures of the Apostles at the tomb of the Virgin and the donor with his wife, 4,777*l.* 10*s.*; 8, Titian (?), portrait of Ludovico Cornaro, *et. sue* 100, 1566, 336*l.*; 9, Masaccio (?), *The Last Supper*, a cabinet picture, 12 in. by 8½ in., 630*l.*; 10, Giacomo da Pontormo (?), an allegory with numerous figures, 315*l.*; 11, Luca Signorelli, *The Circumcision*, large altar picture, with ten life-size figures, 3,150*l.*; 12, Steenwyck and F. Francks, an interior of a house, with figures, a small picture, 8½ in. by 12 in., 204*l.* 15*s.*; 13, Velasquez, portrait of Philip IV. of Spain, standing, whole length, life-size, wearing the Order of the Golden Fleece, in a black dress trimmed with silver, holding a paper inscribed with the name of Velasquez, 6,300*l.* The sum thus expended amounts to 21,719*l.* 5*s.*, which is said to be considerably under the grant made by the Treasury. For the National Portrait Gallery the only purchase was the large portrait-piece representing the Council of English and Spanish Royal Commissioners assembled at old Somerset House in 1604, considered by Mr. Scharf to be the work of Mark Gheeraedts, and not by Juan Pantoja de la Cruz as stated, 2,520*l.* For the National Gallery of Ireland four pictures were purchased by the director, Mr. Doyle:—1, Francia, *Madonna and Child*, attended by a monk and a nun, 262*l.* 10*s.*; 2, Leonardo da Vinci, portrait of a gentleman, inscribed "Alessandro Oliverius V.," 215*l.* 5*s.*; 3, Bonifazio, *The Resurrection*, a large picture, 231*l.*; 4, N. Poussin, *The Entombment*, 504*l.* The sum thus expended amounts to 1,212*l.* 15*s.*, and the gross expenditure in the acquisition of the eighteen pictures for the national collections comes to 25,452*l.*

### MANCHESTER CATHEDRAL.

A REPORT has been prepared by Mr. Joseph Crowther, architect, on the condition of the nave of Manchester Cathedral. It is as follows:—

Amongst the few remaining relics of mediæval Manchester, the cathedral, no less from its architectural pretensions than from its ecclesiastical importance and venerable associations, holds the most distinguished place; and the parishioners will be interested to learn that, after an interval of some years of rest, active measures are again being taken towards the further restoration of the fabric. The renovation of the exterior of the church has been in great part accomplished, but little comparatively has been done towards the restoration of the interior of the fabric, of which that of the nave is now in progress.

Early in the present century the then guardians of the fabric were advised that the whole of the pier arches of the nave and aisles, the great chancel arch, and the superincumbent masonry, including the clerestory, were in so bad a state of dilapidation from the combined effects of time and rough usage as to need extensive reparation, improvement, and strengthening; and the authorities with the best intentions entrusted the execution of this important work to the incompetent persons who had reported on it. It will scarcely be believed that the initiative step taken by these iconoclasts was to cut away the delicately-moulded capitals and bases of the columns and bay shafts, the traceried spandrels over the arches, and the Tudor leaf cresting of the stringcourse surmounting them, and roughly hew all the remaining surfaces of the masonry, including the finely-moulded columns and arches, pre-

paratory to coating the whole with Roman cement. A more recklessly dangerous piece of spoliation it is impossible to conceive, for so far from "repairing, improving, and strengthening" the structure, it was materially weakened by the process—in some vital portions of it to a most dangerous extent. For example, on carefully removing the cement coating from the two most westerly bays on the north side, it was found that the springing stones of the arches immediately resting on the columns had been so much cut away as to leave an area of little more than 14 inches square of solid stone to carry the enormous superincumbent load! A careful calculation of the load which was borne by these stones shows that their reduced sectional area was barely sufficient to sustain it, with the fabric in a state of absolute rest and free from any lateral strain. The wonder, therefore, is that during violent storms of wind, such as that of the great tornado of January 1839, when the pressure of the wind was equal to 50 lbs. on the square foot, and the lofty clerestory must of necessity have been oscillating from so enormous a lateral strain, the whole structure of the nave did not collapse. There can be no doubt that the remaining springers have been cut away to the same extent in order to provide for the cement coating. With equally ignorant recklessness the columns themselves, and especially the bases sustaining them, had been mercilessly cut away, and one of the latter—that viz. of the most easterly column—was patched up with brick! The original architecture of these arcades was of great beauty and delicacy, and the work was so admirably executed and put together that, although of unusual lightness, it was quite adequate to its static requirements, and to withstand the effects of time. But the gifted architect who designed this noble church so constructed the fabric and its various details that not a cubic foot of stone more than necessary was used in the work, especially in this portion of it. A practised eye will at once detect this feature of the construction on examining the masonry of the columns and arches which have been stripped of the cement coating, and fully appreciate the danger to the fabric occasioned by the reckless cutting away of the stonework in order to form a ground and key for the cement coating.

Nor was the reckless treatment of these iconoclasts less mischievous in its results to the beauty of the architecture. It is obvious that the coating of cement, averaging nearly an inch in thickness, necessarily changed completely the sectional form of the mouldings, and destroyed their relative proportions; for whilst the delicate projecting members were much enlarged, and nearly doubled in size in some cases, the equally delicate hollows were almost filled up, or so reduced in width and depth as to grievously mar the æsthetic beauty of the whole work. Happily sufficient portions of the ancient design and mouldings remained for the exact restoration of the original architecture of the north and south sides of the nave. The chancel arch, with its great piers forming the eastern termination of the nave, has been, if possible, more grievously mutilated than the lateral arcades, for the masonry of the piers—which contain winding staircases leading to the roof—has been in parts reduced to a thickness of 3 inches only—a thickness miserably inadequate to the weight it carries. The arch itself has met with even worse usage. Iron hooks have been driven into the joints of the voussours, on the western or nave side, and on these a rim of brickwork was constructed. The spandrels and wall above the brick arch were then lined with wooden studs, lathed and plastered, and the whole of the surfaces covered with panelled tracery of meretricious design, worked in Roman cement. The masonry of the arch and heavy wall above it has been seriously shaken and disrupted by the process of driving in the iron hooks, and the stonework has settled downward in consequence, depressing the arch about five or six inches from its original contour. There are sufficient remains of the arch mouldings and general design of the whole original composition for the exact restoration of the chancel arch and piers; and happily the latter, below the level of the ancient rood loft, have not been coated with cement, and are in a nearly perfect condition.

During the process of shoring up the nave arcades and staying the clerestory walls, previously to removing the mutilated columns and arches, it became necessary to ascertain the condition of the roof timbers, because on the soundness of these the safety of the structure mainly depended during the delicate and somewhat difficult operation of removing and reinstating the columns and arches. On removing the external and traceried lining of the tie beam of the most westerly roof principal, I was much startled to find that the tie beam was completely worm-eaten through three-fourths of its sectional area, and that it was no longer performing its office as a tie, but was simply suspended *in situ* by the principal rafters above, and the whole weight of the principal itself and of the most westerly bay of the roof was sustained by the mortising of the rafters into the king post in the centre, and at the ends by the wall posts and curved struts. This morning, July 3 (more of the external facing of the roof principal and of the bosses in connection having been removed since my last examination), I was able to get at the principal rafters themselves and the joints or the connections of the purlins with the rafters. The north rafter of the principal proved to be in as decayed a state as the tie beam, for with very slight pressure a chisel penetrated for its whole length into the timber, and on drawing it out a piece of the worm-



eaten surface came with it, and that which had been the heart of the beam poured out in the form of dust. The roof appears to have been extensively repaired shortly before the ceiling was painted some thirty-five years since, for the purlins are suspended by wrought-iron straps to the principals, and the transverse ribs in like manner to the purlins, from which it would appear that at that time the tenons of the framing were found to be so decayed as to need the help of the straps for their support. The ends of the tie beams of this principal do not bed directly on the clerestory walls, but on a strong oak corbel piece bedded on the masonry, and projecting about two feet into the nave, and into this corbel piece the head of the wall-posts is framed. I cannot confidently say at present whether or no this is the original construction; but it appears to be so from the circumstance that a portion of the traceried spandril of the curved strut is worked upon it. Happily the north corbel is quite sound, but the wall-post and the lower portion of the curved strut below it are in an advanced state of decay.

From the foregoing description it will be seen that the several timbers of the roof principals are, in technical language, "built up," that is to say, the timbers forming the chief framework are simply plain squared beams, covered over or lined out with richly-moulded and traceried casings wrought on comparatively thin scantlings of oak, which are pinned with oak pins to the solid inner frame, and formed the surfaces exposed to view. A considerable portion of these applied enrichments have, so far, proved to be tolerably sound, and the same may be said of the wonderfully rich and varied bosses placed at the intersection of the moulded timbers forming the panelled ceiling betwixt the principals. So far as I can at present judge, the plain foundation of the principals will chiefly have to be replaced by new timbers on which the ancient casings and enrichments, so far as they are sound, can be fixed as heretofore, and on this assumption, after making sufficient allowance for renewing decayed portions of the latter, I have formed the following estimate:—

*Estimate of Cost of Restoring the Roof over the Nave.*

No. 7 principals, at £125 . . . .	£875 0 0
No. 6 bays, at £150 . . . .	900 0 0
Removing the lead and roof timbers . .	85 0 0
Shoring up and scaffolding . . . .	120 0 0
Relaying the lead and gutters, &c. . .	80 0 0
Total . . . . .	£2,060 0 0

A meeting has been held, at which it was resolved to ask Mr. Crowther to prepare a second report on the condition of the building before subscriptions are solicited.

## PUBLIC WORKS IN GREECE.

THE enterprise of cutting a ship canal through the Isthmus of Corinth, which was begun, according to Strabo, by Demetrius I. (surnamed Poliorcetes) more than 2,000 years ago, and abandoned because the engineers of that period supposed that the seas in the two gulfs were not of the same level, and which subsequently baffled the efforts of Julius Cæsar, Caligula, Nero, and finally Herodes Atticus, appears likely to be recommenced in the present day under more favourable and probable prospects for its successful termination by "the modern Hercules"—a joint-stock company. A group of Greek and French capitalists have offered to form a society for the purpose of cutting this canal, provided that certain modifications which they have proposed be made in the law defining the terms upon which this concession is to be granted to any company willing to undertake the enterprise under specified conditions. As soon as a Bill has passed the Chamber of Deputies and received the royal sanction, the promoters are prepared to form a company, under the presidency of General Turr, to carry out the enterprise.

The cost of this undertaking is estimated at 30,000,000 francs, and it is expected that it will be terminated within four years from its actual commencement. Some preliminary works have been already commenced, and shafts sunk to ascertain the nature and hardness of the rocks through which a channel will have to be cut. The chief engineer, M. Gersser, with a competent staff of assistants, are on the spot studying the ground.

The convention for carrying out the dessication of the Copaic Lake has been conceded to a French company, under the title of the "Compagnie Française pour le dessèchement et l'Exploitation du Lac Copaïs." The capital of the company is fixed at 15,000,000 francs, divided into 30,000 shares of 500 francs each, the whole of which have been already allotted, and on which 250 francs per share are paid up. The duration of the society is for 99 years, commencing from the date of its definitive constitution. As may be inferred from its title, the principal object of this company is the draining and reclaiming of the vast marsh or pestilent morass, at present known under the name of the Copaic lake, which now extends over a great portion of the barren province of Livadia, and the miasma from which, in summer and autumn, renders the neighbouring country nearly uninhabitable. The extent of land which it is thus proposed to reclaim and bring under cultivation is calculated at 24,000 hectares,

equal to about 58,000 square acres, of which 8,000 hectares will become the absolute property of the company after the expiration of the 99 years, during which time the whole of the land reclaimed will belong to the society, after which period, with the exception of the above-mentioned 8,000 hectares, the rest will lapse to the State. The preliminary works have been already commenced.

The only railway in Greece at the present day is one of 6 miles in length connecting the Piræus with Athens. This line is a single one, with a junction at the Phalerum, where the train stops to take up and set down passengers. Two new lines of railway are in the course of construction, namely, one in the Peloponnesus, from Pyrgos to Katakolo, a distance of 7 miles; and another from Larissa to Volo, in Thessaly, about 30 miles in length. Several other lines of railway are, however, projected, and various conventions have from time to time been made between the promoters of companies on the one part, and the Greek Ministry of the day on the other, for the construction of lines of railways in Greece. Very few, however, if any, of these conventions have ever advanced beyond their preliminary stages, or have received the consent and approval of the Chamber of Deputies. The following are the principal and most important of these proposed lines, namely:—A railway through Northern Greece, passing by Thebes, Livadia, and Lamia, &c., to Larissa, in Thessaly, the concession for which, it is said, has been provisionally conceded to the same French company which is now engaged in constructing the line of railway from Larissa to Volo, and which has also offered to make a line from Athens to Patras by the Isthmus of Corinth, which will follow the sea-coast along the southern shores of the Gulf of Corinth.

A proposal has been made by an Anglo-French company for shortening the transit of the Indian mail to Brindisi by opening a line of railway from the Port of Monembasia through the Peloponnesus, crossing the Gulf of Corinth at its narrowest point near Patras 'at the castles of Rio and Anti-Rio by means of a steam-ferry, and then running through Western Acarnania to a port in Albania opposite Brindisi, to which place the mails and passengers would be conveyed in quick and powerful steamers across the Adriatic. It is calculated that by means of this route the Indian mail would reach Brindisi from Port Said thirty-six hours sooner than it does at present, and that the vessels of the Peninsular and Oriental Steam Navigation Company would run to Monembasia, instead of Brindisi, from Port Said, and *vice versa*.

A Belgian company is now engaged in laying down the tramways in some of the principal streets in Athens. It is proposed to extend these lines to the Phalerum Bay, Piræus, &c. The streets of the Piræus are now fairly lighted with gas, but it is introduced into very few of the dwelling-houses. The cost is about three times greater than it is in England. The esplanade at the Phalerum and the Railway Hotel are lighted by means of the electric light on the Jablochkoff system.

The present supply of water, both in the towns of the Piræus and Athens, is very deficient in quantity for the number of inhabitants, and bad in quality during the summer months; the recent outbreaks of typhoid fever in Athens, which assumed an epidemic form last summer, being mainly attributed to the impurity of the water supplied to that town. Several English, French, and other companies have made offers to the Municipality of Athens for the purpose of remedying this deficiency and bringing water from long distances. The subject is one of great importance as regards the future increase and extension of the towns of Athens and the Piræus. But up to this time the Municipality of Athens, whose finances are not in a very flourishing condition, has not yet decided on accepting the terms of any of the rival companies or contractors.

## UNIVERSITY COLLEGE, LONDON.

THE following are the results of examinations of work done in the class of Architecture:—

*Modern Practice.*—Prize: A. W. Glasson. 2nd prize: H. W. R. Martin. 2nd class certificate: T. Andrews. 3rd class certificates: W. H. A. Barry, C. M. Shiner, J. E. Sears, P. Condy, G. P. K. Young. Twenty-one attended the lectures. Ten attended the examination.

*Art.*—Medal: W. C. Jones. Prize: H. W. R. Martin. 2nd class certificate: R. W. Hamilton. 3rd class certificates: W. G. King, L. Conder, P. Condy, F. P. Oakley. Nineteen attended the lectures. Eleven attended the examination.

*Construction.*—Medal: C. M. Shiner. 2nd prize: G. R. K. Young. 3rd prize: W. C. Jones. 4th certificate: H. C. Simmons. 1st class certificates, with marks entitled to prize: P. Condy, W. G. King, J. E. Sears. 2nd class certificates: H. Woodroffe, H. W. R. Martin. 3rd class certificates: H. W. Moxon, B. V. Westbrook, W. J. Gibbon, R. M. Hamilton, W. J. Gargery. Twenty-six attended the lectures. Nineteen attended the examination.

**Burham.**—The new church of St. Mary, at Burham, has been opened. The church has been erected from the plans of Mr. E. W. Stephens, architect, of Maidstone, the building being designed in Early Decorated style. Messrs. Naylar & Son, of Rochester, were the builders.



## NOTES AND COMMENTS.

THE programme of the Social Science Congress at Nottingham may comprise subjects which are useful, but nevertheless they are not attractive. In the Art Department they are as follows:—On the new Royal College of Music. In what way can the influence of Art be brought to bear on the masses of the population in large towns? What are the proper limits of conservatism in regard to ancient buildings? The Health Department will consider infant mortality, hospital administration, and infectious diseases. The meetings will be held during the week ending September 27, and University College, the Masonic Hall, and the Mechanics' Institution have been placed at the disposal of the Committee.

At its last sitting the French Artists' Committee of "Ninety" finally discussed and voted the regulations for next year's Salon. We have already mentioned several of the proposed alterations in the *règlement*; these have now been adopted, but do not form any great departure from the rules of the 1882 Exhibition. The most important, perhaps, of all the changes is the one which increases the number of medals from thirty-two to forty-two, seven of which will be absolutely reserved for foreign artists.

AN address was delivered by Mr. E. C. ROBINS, F.S.A., on Thursday, at the Royal Institution, descriptive of the work of the Sanitary Institution. He described among other things some experiments of Dr. RENK, at the Hygienic Institution at Munich, which were undertaken to discover the conditions under which ground air entered houses. They follow out the investigations of Dr. PETTENKOFER. By means of a differential manometer Dr. RENK discovered that in a house at Munich the air in the ground beneath the paving of the cellars was always under a higher pressure than the air of the cellar itself, from which result he inferred that the ground air is always in motion from the soil into the house—the pavement, being bricks laid in mortar, was permeable by air. This higher pressure of the air under the house he found was caused by the wind and by the difference in temperature between the inside and the outside of the house. It happened that in and under the cellar paving a draught-channel for ventilating purposes was situated, being constructed of bricks and mortar, and covered with stone slabs. The channel was connected with the chimney of the boiler which generated the steam for the heating apparatus. This draught-channel had a very great influence on the ground air to a distance of six yards from its walls, and the ground air was more attracted by the current of air passing through the draught-channel than by the air in the basement of the house. Moreover, the air of the cellar was in like manner, for a certain distance from it, drawn into the same draught-channel current, and with increasing rapidity the nearer it approached the channel. This experiment suggested to Dr. RENK a means of keeping ground air out of houses—that is, by permeable tubes connected with the chimney of the kitchen fire, up the flue of which a constant current being kept up, thereby a sufficient draught is created to withdraw the ground air from the soil and carry it above the roofs.

FOR some time past there have been negotiations between the Ministry of Beaux-Arts and the city of Paris in reference to the foundation of a School of Decorative Art. The authorities, after much consideration, have at last decided upon a site suitable for the erection of the necessary buildings, viz., that occupied at present by a wing of the old Hôtel-Dieu. The building still contains a number of beds, which cannot be removed until the new hospital, now in course of construction at the Porte St. Ouen, is completed, which will probably be before the end of the year; the construction of the new School of Decorative Art may therefore be commenced with the new year. The city of Paris will find the site, which will have to be purchased from the Assistance Publique (similar to the English Charity Commissioners), while the State is to bear the expense of the building, fitting up, &c.

THE French Minister of the Interior has nominated a Commission charged to draw up a scheme whereby co-operative associations of working-men may participate in the competition and adjudication of State works. He has requested each of his Ministerial colleagues to name two gentlemen from their several departments to serve on this Commission.

SEVERAL new buildings are about to be erected on the Blackden Estate, Fore Street, in the City, at an estimated cost of 30,000*l.* On Wednesday Messrs. Fox & BOUSFIELD let six of the sites on building leases for terms of eighty years. In letting the property the auctioneer said that the purchaser of each site must enter into an undertaking to expend a sum which would be named in the erection of new buildings, the lessor's architect certifying that such an amount had been expended before an underlease by the lessee would be sanctioned. The first lot submitted was withdrawn, but all the other lots were let. Lot 2 consisted of Nos. 46, 47, and 48 Fore Street, and on the site 4,500*l.* is to be expended in new buildings. It was let at an annual ground rent of 300*l.* The next lot, containing an area of 1,381 feet, was let at a ground rent of 180*l.* per annum; 2,500*l.* to be expended in new buildings. Another lot, containing an area of 1,898 feet, was let at a ground rent of 220*l.* per annum; 3,000 to be expended on new buildings. The fourth lot, containing an area of 3,852 feet, and on which 7,000*l.* was to be expended in building, was let at an annual ground rent of 610*l.* The last lot, containing an area of 9,222 feet, was let at an annual ground rent of 910*l.*, the amount to be expended in new buildings on the site being 17,000*l.*

IN reply to the petition of the French artists praying for leave to organise and issue tickets for a lottery to raise upwards of 500,000*l.* for the erection of an exhibition building of their own, the Minister of the Interior has returned an evasive or rather a procrastinating answer, to the effect that he cannot pronounce definitely on the question until after the end of the present year. This reply is generally looked upon as a polite way of throwing cold water on the scheme, which has certainly not found favour in Ministerial eyes, and is thus decently interred for the present.

THE large room at the Cannon Street Hotel was crowded on Tuesday last, when the Barnsbury Park Estate in Islington was sold. The rentals were represented as amounting to 14,000*l.* per annum. The property was offered in 85 lots, 46 of which consisted of freehold ground-rents, amounting to 812*l.* 10*s.* per annum; and 39 lots consisted of freehold residences on the estate, let on lease for terms expiring in twenty-six years, at a peppercorn rent. The property covers a ground area of 27 acres, and comprises upwards of 300 houses. MESSRS. DEBENHAM, TEWSON, FARMER & BRIDGEWATER were the auctioneers, and Mr. TEWSON, who conducted the sale, said it was one of the most valuable and important properties in the metropolis that he had ever offered. There was an eager demand for the several lots, the whole of which were sold, the aggregate amount realised in anticipation of the prospective rental of 14,000*l.* a year being between 73,000*l.* and 74,000*l.*

A COLOSSAL equestrian statue of CHARLEMAGNE is about to be erected in the new square now in progress near Notre Dame, on the site of the Hôtel Dieu, Paris. The statue, which was originally exhibited at the Exposition of 1878, is the work of the brothers ROCHET, one of whom died, it is said, from the fatigues of its execution. It is in bronze, upwards of 25 feet high, and will be mounted on a 16-foot pedestal, specially designed for it by M. VIOLETT LE DUC a short time before his death.

AN influential committee has been formed for the purpose of obtaining subscriptions towards the erection of an appropriate memorial to SAMUEL PEPYS in the Church of St. Olave's, Hart Street. It seems strange that no monument of any kind should exist in the church with which the Diarist was so intimately connected, and where he was buried, and it is thought that many of those who have experienced pleasure in reading the Diary will be willing to contribute something in order that the proposal may be carried out satisfactorily. The committee consists of the chief representatives of the institutions with which PEPYS was connected, viz., the Master of Magdalene College, Cambridge, the President of the Royal Society, the Deputy Master of the Trinity House, the Secretary to the Admiralty, the Master of the Clothworkers' Company, and some others. The treasurer is Mr. OWEN ROBERTS, clerk to the Clothworkers' Company; and Mr. HENRY B. WHEATLEY, 6 Minford Gardens, W., is honorary secretary.









AGRICULTURE IN INDIA  
(THE GREAT OXEN)



## ILLUSTRATIONS.

AGRICULTURE: A DECORATIVE FRIEZE.—PART III.

THE DANISH OCCUPATION OF LINCOLNSHIRE  
ILLUSTRATED BY LOCAL NAMES.\*

NO person of observation, transplanted from one of the southern counties of England to Lincolnshire, can fail to be struck with the difference in the character of the local names of the two districts. The "hursts" and "dens" with which he has been familiar in Kent and Sussex have totally disappeared. The "leys" and "worths" appear but scantily, while the "tons" and "stokes," which are there so abundant, though to be found in fair numbers, are few in comparison. In their place a new set of terminatives present themselves. "Bys" by the score, "thorps" by the dozen; a good sprinkling of "tofts" and "holms," of "becks" and "steads," meet his eye as he scans the map, and present themselves in their actuality as he walks or rides about. Nor is it in the termination alone that this strangeness is seen. The first half of the names—the variable element, as we may call it—has also often something unusual in its look and sound. Hard sounds prevail over soft ones. Dentials and palatals take the place of labials and liquids. The harsh combination of "s" with a hard "c" or "k" or "t," as in Scawby, Skellingthorpe, Skirbeck, Stenigot, and the like—sometimes made harsher still by the addition of an "r," as Scremby, Scrivelsby, Strubby—is as frequent as to southern ears it is unpleasant. The Dorset Shillingstone becomes Skillington, the Somersetshire Shopwick appears as Scopwick. The southern "ch" stiffens into "c" and "k." Carlby takes the place of the Charltons (fifteen of which, as distinct parishes, may be counted south of the Thames), Cadwell of Chadwell, Kelfield of Chalfield, Killingham of Chillenden. "Church" as a formative is seldom or never found, either as prefix or an affix, "kirk" being its substitute. Instead of Churchham, Churchstoke, and Churchstow, we have in Lincolnshire Kirkby (six times over), Kirkton (smoothed into Kirton), and Kirkstead; while the compounds Basschurch, Dymchurch, Marychurch, and the like, are represented by such forms as Algarkirk and Peakirk. This difference in the character of the local names, it will be at once felt, cannot be accidental. It must indicate a corresponding difference in the tribes or peoples by whom these names were imposed. Names, we all know, were not given in old times as they too often are given now, out of mere whim or caprice, without the slightest regard to their suitability, so that a row of little ugly brick cottages by a dusty roadside is yclept "Paradise Place," and a batch of tenements, whose only view is over a hideous brickfield, is known as "Prospect Terrace," and "Abbeys" and "Priorys" and "Granges" are among the common stock of the builder's nomenclature. Anciently every local name had a meaning, and was given by those who knew that meaning, and because of it. It is not always—perhaps not often—possible for us, at this distance of time, and with the alteration and mutilation to which our local names have been subjected in the mouths of so many generations, to determine this meaning. It is often guess-work with the best-equipped philologists. But, difficult as the problem is, we are sure it has a solution, and this solution is well worth any amount of trouble to discover. As archæology is the handmaid of history, so is philology the handmaid of archæology. A well-directed study of words and names is one of the most important helps in arriving at the knowledge of things. No ancient place or name is without a signification, and in these names a store of history lies couched, waiting to be brought to light by the science of comparative philology. In the words of Professor Earle, "when the duly-trained philological eye traverses the map of any district it can read at a glance the traces thereon left, and assign each name to the race that gave it birth." We shall therefore do well to enquire what country of Europe exhibits place-names of a similar character to those which distinguish our Lincolnshire local nomenclature. If successful in this search, we cannot be far wrong in assigning a common origin to both, and in drawing the conclusion that Lincolnshire was at one time occupied by settlers from that country.

Now the nearest land to Lincolnshire in an eastward direction is Denmark. Our thoughts are therefore at once directed to that country. We know that in the ninth and eleventh centuries England was subject to perpetual inroads from the inhabitants of that country, and that no part suffered more than Lincolnshire. And, if we examine a map of Denmark, or run our eye over a gazetteer or index of place-names in that country, the very elements most distinctive of Lincolnshire names will be found with the greatest frequency. "Bys" and "holms," "thorps" (often modernised into "throp") and "becks," "tofts" and "steads," are of constant occurrence. Names are continually met with, such as Aaby, Lyngby, Skibby; Bandholm, Oxholm, Draxholm; Ringsted, Idsted, Orsted; Olskirk, Nykirk (the New Church of the southern counties), which would be quite at home in Lincolnshire. The whole vocabulary has a familiar look. The conclusion is as irre-

sistible as it is obvious. Our local names are to a large extent Danish names transplanted. To unravel their meaning we must ask what they signify in their native tongue. It is as true of words and names as of persons—*Cælum non animum mutant qui trans mare currunt*.

Let us examine some of those of more frequent occurrence. "By," the most frequent of all, originally meant a dwelling or a single farm, and afterwards came to denote a village. It is sometimes added to a root, giving the position or character of the place, as "Dalby," the village in the dale; "Scawby," the village in the wood; "Risby," the beech tree village; "Kirby," or "Kirkby," the same as Kirton, the village where the church stands; but more usually affixed to the possessive case of a personal name, as "Ormesby," the village of Orm or Worm; "Grimsby" (the village of Grim, corresponding to Grimthorpe), Asgardby, Kettleby, &c. "Thorpe," the next in frequency, signifies a collection of houses, corresponding to the German "dorf," as Theddlethorpe, Saus-thorpe, sometimes standing by itself, as Thorpe-on-the-hill. "Toft," which we have in Bratoft, Fishtoft, Huttoft, signifies a homestead or enclosure, and is an indication of permanent colonisation. "Beck," a brook; "naes" or "ness," a promontory; "garth" (the same root as the English "yard"), an enclosure, or sted, standing-place, or settlement; "aey" or "ea," an island in the midst of water; "holm," an island of hard ground in the midst of a morass—are all Danish test words, occurring with more or less frequency in Lincolnshire. Riseholme, Sudbrookholm, Dunholme, and Mickleholm (the large island), tell of a time before the streamlets were confined within banks and made to flow in certain beds, and the district round was marsh, out of which the holms rose as islands. "Thwait," a characteristic Scandinavian word, signifying a forest clearing, does not occur among us. The "fleets" indicate creeks or arms of the sea, much the same as "wicks," or "viks," where the sea-rovers anchored their boats, and from which they took their name of vikings, or "creekers."

We have only to take an intelligent survey of the map of our county, bearing these test words in mind with their meanings, to realise the truth of Mr. Isaac Taylor's statement that "whole districts of Lincolnshire present in their local names overwhelming evidence of an almost exclusive Danish occupancy." No inconsiderable proportion of our villages and hamlets are proved by the same evidence to have been little Danish colonies, usually taking their distinctive appellations—the variable part, as I have called it—from the personal name of the original settler from Jutland or the Danish islands. I say "districts of Lincolnshire," for any one who will take the trouble of examining the map for that purpose will observe that the prevalence of Danish names is confined to particular localities, and that there are large parts of the county where they occur but seldom, or not at all. In South Lincolnshire, especially the eastern part, where we are now met (the title of my paper must be so far corrected), such traces of Danish occupation are scarcely to be found. The reason is evident. The whole of this district was in early times one vast morass, through which the Welland and the Nen and the Glen soaked their way to the Wash, and afforded no temptation to settlers. The whole district between the Foss Dyke Wash on the north and the Cross Keys Wash on the south, and bounded to the west by the Carr Dyke, is still thinly populated. Parishes are few and of vast extent, and, as a rule, have English names. The Suttons, Weston, Moulton, and Luton exhibit the Anglo-Saxon test word "ton," an enclosure; Spalding, Deeping, and Quadring, the patronymic "ing," marking the settlement of a tribe—the Spaldingas, Deepingas, Quadringas. Crowland speaks for itself. The terminative "fleet" in Surfleet, and Fleet itself, may be either Scandinavian (Norse "fliot," Danish "flod"), but is more usually regarded as Anglo-Saxon, "fleet." The word is familiar to us in Fleet Street, London, so called from the River Fleet, which ran where Farringdon Street now is—Purfleet, where the powder magazines just now are giving the inhabitants a very uneasy life—Northfleet, Southfleet, and the like. In all the meaning is the same, a small inlet, or estuary at a river's mouth. The only Danish names I have noticed in this district are Thurlby and Langtoft, between Bourn and Deeping. Ravenscleugh and Ravensbrook, between Holbeach and Sutton St. James, may indicate places where those "sons of misery and barbarism," as Lappen-berg styles the Danish invaders, set up their raven standard of devastation, "the war flag that was called the Raven." It may, however, be derived from being the haunt of the birds of that name, or from "Rafn," the Danish proper name. The same may be said of the Ravendales, near Grimsby. Ravensfleet, on the banks of the Trent, near Gainsborough, and Raventhorpe-in-Appleby may be more confidently referred to Danish settlement. The most suggestive name in this district is the little hamlet of Guthramcote, in Bourn. It would be very interesting if we could connect this name with the leader of the pirate host which in the ninth century swept England before them, from the Humber to the Thames, defeated by our own Alfred, the saviour of England from Danish rule, at Edington, in Wilts; but by the peace of Wedmni, in Somerset, left in possession as overlord of more than half the island, all within a line from London to Bedford, and from Bedford to Chester—the Danelagh, as it was called—the mighty Guthrum, or Athelstan, as he was named by his royal godfather, Alfred, on his baptism as in the Parrett at Aller. This, however

\* A paper by the Rev. E. Venables, read at the meeting of the Lincoln Archæological Society.



possible, is too uncertain to be dwelt upon. Guthrum or Gorm was one of the most common Danish names, and "Guthrum's cote" may more probably be so called from being the cottage home of an humble namesake of the Danish king. It may also be remarked that the terminative "cote" is rather Anglo-Saxon than Scandinavian. The "cotes" which are so abundant on the seaboard to the north and south of Grimsby—Great Coates, Little Coates, North Coates, Somercoates, &c.—indicate outlying stations on the rich pasture lands fringing the shore of the Humber and German Ocean.

To discover the chief areas of Danish occupation we must look northwards and westwards. We should expect to find evidence of them most abundant along the shores of the Humber and the Trent. These rivers were the highways along which these pirate fleets made their entrance into the country, and after the first period of devastation, the firing of homesteads, the slaughter of men, the capture of the women for slavery or shame, the children tossed on the pikes or sold in the market-place, Christian priests slain at the altar by the worshippers of Woden, the ruin of churches and the pillage of the sacred vessels, which is again and again recorded in such terrible words by the Anglo-Saxon chroniclers, it would be along the course of these streams, or in the rich valleys and uplands of their banks, that the first permanent settlements of the conquerors would be made. The map confirms this idea. The neighbourhood of Grimsby, according to Dr. Latham, "the oldest and most thoroughly Danish town" we have, presents a remarkable number of Scandinavian place names; almost every parish is distinctly Danish—Keelby, Aylesby, Irby, Barnetby, Beelsby, Hawerby, Thoresby, Audby, Grainsby, Ormsby, Fotherby, Brocklesby, Riby, Ulceby, Utterby, Killingholme, Wragholm, Conisholme, Scupholme, Cleethorpe, Grainthorpe; Scartho, Thurnscoe, Ravendale, all mark the fixed residence of a Danish population greatly in excess of Saxon, or, as it is now the fashion to call them, English occupiers. Taking a district nowhere more than ten miles from Grimsby, we find of forty-six village names, twenty-eight Danish, fourteen Saxon, and four doubtful. Continuing along the Humber westwards, we come upon a remarkable group of Danish names at the mouth of the Trent. The eastern horn of the embouchure into the Humber is Trent Ness, a well-known Scandinavian root, meaning a nose or projecting bit of land, familiar to us in the Naze, in Norway and Essex; found so far north as Caithness, and as far south as Cape Grinez, near Calais; and appearing at intervals along our Lincolnshire coast, at Chowder Ness, Skitter Ness, and Clee Ness; and always marking the course of these Scandinavian sea-rovers. Towards the extremity of the high ground to the east of the Trent, that oolitic range running all through the county from Grantham, by Ancaster and Lincoln to the Humber, there is quite a remarkable little string of Danish names, chiefly with the termination "by"—Coleby, Thealby, Normanby, Risby, Appleby, Roxby, Conisby, Brumby, Ashby, Manby, Scawby; to which we may add Scunthorpe, Bishophthorp, Raventhorp, and Sandhoe. Crossing the Aneholme valley, the crest of the Wolds presents us with Ferriby, Saxby, Worlabby, Wrawby, succeeding one another like beads on a string. On the other side of the Trent, the Isle of Axholme exhibits but few Danish names. There are several "thorps"—Althorp, Derrythorp, Gunthorp; but only one "by," Keadby.

The history of the designation of the Isle of Axholme, or, in its full form, Axeyholm, is too curious to be altogether passed over, though leading us a little away from our special subject. It is an admirable example of what may be called stratification in local nomenclature. As geological strata exhibit the successive formations which have gone to make up the earth's crust at that particular spot, so a compound name may indicate, by the reduplication of synonyms, the various races that, one after another, have occupied the district. In this name we have Celtic, Saxon, Danish, and Norman elements. The syllable "Ax," the old British root for water—which appears, with all the vowels of the alphabet, in the Exe, Isca, Oxford, Usk (we all know the Irish "usquebaugh," the water of life, *aqua vitæ*), was given by the Celtic inhabitants to the vast mere or lake which then covered the whole district. The Saxons planted a settlement on the hard ground rising out of the swamp and named it Ax-Eye, or island in the water. The name is still preserved in the village of Haxey. The Danish freebooters moored their keels in the creeks, and ejected the Saxon inhabitants, and, adding their own "holm," called it Axeyholm. Finally, the Normans, as ignorant of the meaning of "holm" as the Danes were of "Eye," prefixed their own "Isle," and the district became the Isle of Axeyholme, or Axelholme, synonyms of island thus actually occurring three times over in different forms.

But to return to purely Danish names, at the risk of taxing the patience of my hearers, I must refer to two even more remarkable groups in our county, the one near Horncastle and the other near Sleaford. Of the former, embracing the southern extension of the Wolds, Mr. Isaac Taylor writes:—"A district, about nine miles by twelve, between Tattershall, New Bolingbroke, Horncastle, and Spilsby, would appear to have been more exclusively Danish than any other in the kingdom. In this small space there are some forty unmistakable Danish village names, such as Kirby, Moorby,

Enderby, Wilksby, Claxby, Miningsby, Hagnaby, Dalderby, Scrivelsby, Hareby, Lusby, Revesby, Raithby, Somersby, Salmondby, Fulletby, Ashby, Asgardby, Hemingby, Toft." I may supplement the list with Winceby, Scremby, Driby, Ormesby, Swaby, Gunby, Thoresby, Rigsby, Ulceby, Saucethorpe. Could we have more convincing evidence of the almost exclusive occupation of the Southern Wolds by Danish settlers than this overwhelming preponderance of Danish village names? An examination of the names of the district round Sleaford, with its Aunsby and Dembleby, Rauceby and Culverthorpe—would lead to the same conclusion; but to enumerate them would be tedious. Any who care to pursue the investigation can do it for themselves.

I would draw my paper to a conclusion by a rough but fairly trustworthy estimate of the proportion of Danish villages in Lincolnshire. Taking the "Diocesan Calendar" as my guide, I find 666 separate villages or chapelries named. Of these no fewer than 172, more than one-quarter, end in the distinctive Danish termination "by," 43 end in "thorp," 9 in "holm," and 4 in "toft;" the alphabetical index to "White's Gazetteer," which embraces hamlets and even separate farms, more than doubles the number of separate names, bringing it up to 1,300. This number includes 243 "bys," 34 "thorps," 18 "holms," and 14 "tofts," besides sundry "becks," "steads," "wicks," and "hoes." This raises the total sum of Danish place names in Lincolnshire to rather more than three hundred, the number given by Mr. Isaac Taylor, and, according to him, exceeding that to be found in all the rest of England put together south of the Humber. Leicestershire holds the second place with 66 "bys" and 19 "thorps;" Northamptonshire next with 26 "bys" and 23 "thorps;" Nottinghamshire gives 15 "bys" and 20 "thorps." All these countries formed part of the Danelagh, and were subject to the confederation of the five burghs—Lincoln, Leicester, Stamford, Derby, and Nottingham. Even to the north of the Humber no county approaches our own in this respect. Yorkshire, with its immense area, according to Worsae, supplies only 167 "bys," of which 100 are in the North Riding, Cumberland, and Westmoreland, after the Danelagh, the chief seats of Scandinavian colonisation, furnish respectively 43 and 20 "bys." The large county of Lancashire only 9.

The contrast between the county of Lincoln and other counties in respect of Danish occupancy, as proved by this test, is very remarkable. Essex supplies only two "bys," Suffolk three, and Kent, Buckinghamshire, and Huntingdonshire one apiece. The reason of this difference is plain. Too well and too fatally known in both quarters of England—to the one the Danish rovers came as pirates only, in the other they settled down as inhabitants; and it is habitation that gives names to places. The marked events of history are comparatively powerless in this respect. The substitution of Battle for Senlæ is an exception that proves the rule. The landings of the piratical Northmen in Kent and Sussex, in Dorset and Somerset, and their inroads into the interior, left no trace on the local nomenclature because the marauders themselves disappeared. They landed, they harried the country, they swept off their booty, returned to their ships, and sailed away with the spoil. With us in Lincolnshire, Danish piracy was followed by Danish settlement. The district ceded by Alfred to secure the peaceable possession of the rest of his long sorely-afflicted country—the oft named Danelagh—became purely Danish. The entries in the Anglo-Saxon chronicle, brief but momentous, tell how the ceded territory was parcelled out among the victorious occupants. The place names show the systematic manner in which this division was carried out. Our own wapentakes, nearly all of which bear Danish names, are the military divisions of the Danish leaders, so called either from "taking" up the weapons of war, or, more probably, from the pains displayed in "teaching" the youth the use of them. We have seen how frequent—how almost universal—is the termination "by," the building or tenement, and, as Mr. Freeman has remarked, in a vast number of cases the name of the Danish lord to whom it was assigned in the occupation of the ninth century. Such names as Candlesby, Grimsby, and Ormsby tell their own story. They speak of a conquered land, dealt out by the chieftains to their followers in portions, small or large, according to their claims and their power of making these claims good. Each of the new owners called the lands by his own name, and thus secured for himself a deathless memory. Their deeds, their persons, their characters are forgotten, but their names will remain stamped in the soil as long as England lasts. They did their part in the making of England, and their work remains, and we are the better, the nobler, the happier for it. To conclude with the words of Mr. Kington Oliphant, "English freedom was in the end the gainer by the fresh blood that now flowed in. When Domesday Book was compiled, no shire could vie with that of Lincoln in the thousands of its freeholders. Danish surnames, like Anderson—a name respected and beloved by us in this county, and more especially by the members of its Architectural Society—Paterson, and, greater than all, Nelson, show the good blood that our northern and eastern shires can boast," and which would have been of feeble strain but for the infusion of that which has flowed down to us through the veins of our Danish forefathers, and now to be



renewed in the race of our future sovereigns, the children of the

Sea kings' daughter from over the sea,  
Blissful bride of a blissful heir,  
Bride of the heir of the kings of the sea—  
Alexandra."

### FIRE RISKS FROM ELECTRIC LIGHTING.

THE following rules and regulations for the prevention of fire risks arising from electric lighting have been recommended by the Council of the Society of Telegraph Engineers and of Electricians, in accordance with the report of the committee appointed by them on May 11, 1882, to consider the subject:—

The members of the committee were:—Professor W. G. Adams, F.R.S., vice-president; Sir Charles T. Bright, T. Russell Cramp-ton, R. E. Crompton, W. Crookes, F.R.S., Warren De la Rue, D.C.L., F.R.S., Professor G. C. Foster, F.R.S., past-president; Edward Graves, J. E. H. Gordon, Dr. J. Hopkinson, F.R.S., Professor D. E. Hughes, F.R.S., vice-president; W. H. Preece, F.R.S., past-president; Alexander Siemens, C. E. Spagnoletti, vice-president; James N. Shoolbred, Augustus Stroh, Sir Wm. Thompson, F.R.S., past-president; Lieutenant-Colonel C. E. Webber, R.E., president.

These rules and regulations are drawn up not only for the guidance and instruction of those who have electric-lighting apparatus installed on their premises, but for the reduction to a minimum of those risks of fire which are inherent to every system of artificial illumination. The chief dangers of every new application of electricity arise mainly from ignorance and inexperience on the part of those who supply and fit up the requisite plant. The difficulties that beset the electrical engineer are chiefly internal and invisible, and they can only be effectually guarded against by "testing" or probing with electric currents. They depend chiefly on leakage, undue resistance in the conductor, and bad joints, which lead to waste of energy and the production of heat. These defects can only be detected by measuring, by means of special apparatus, the currents that are, either ordinarily or for the purpose of testing, passed through the circuit. Bare or exposed conductors should always be within visual inspection, since the accidental falling on to or the thoughtless placing of other conducting bodies upon such conductors might lead to "short circuiting," or the sudden generation of heat due to a powerful current of electricity in conductors too small to carry it. It cannot be too strongly urged that among the chief enemies to be guarded against are the presence of moisture and the use of "earth" as part of the circuit. Moisture leads to loss of current and to the destruction of the conductor by electrolytic corrosion; and the injudicious use of "earth" as a part of the circuit tends to magnify every other source of difficulty and danger. The chief element of safety is the employment of skilled and experienced electricians to supervise the work.

#### I. THE DYNAMO MACHINE.

1. The dynamo machine should be fixed in a dry place.
2. It should not be exposed to dust or flyings.
3. It should be kept perfectly clean, and its bearings well oiled.
4. The insulation of its coils and conductors should be perfect.
5. It is better, when practicable, to fix it on an insulating bed.
6. All conductors in the dynamo room should be firmly supported, well insulated, conveniently arranged for inspection, and marked or numbered.

#### II. THE WIRES.

7. Every switch or commutator used for turning the current on or off should be constructed so that when it is moved and left to itself it cannot permit of a permanent arc or of heating; and its stand should be made of slate, stoneware, or some other incombustible substance.
  8. There should be in connection with the main circuit a safety fuse, constructed of easily fusible metal which would be melted if the current attain any undue magnitude, and would thus cause the circuit to be broken.
  9. Every part of the circuit should be so determined that the gauge of wire to be used is properly proportioned to the currents it will have to carry; and changes of circuit, from a larger to a smaller conductor, should be sufficiently protected with suitable safety fuses, so that no portion of the conductor should ever be allowed to attain a temperature exceeding 150 deg. F.
- N.B.—These fuses are of the very essence of safety. They should always be enclosed in incombustible cases. Even if wires become perceptibly warmed by the ordinary current, it is a proof that they are too small for the work they have to do, and that they ought to be replaced by larger wires.
10. Under ordinary circumstances complete metallic circuits should be used, and the employment of gas or water-pipes as conductors for the purpose of completing the circuit should in no case be allowed.
  11. Where bare wire out of doors rests on insulating supports it should be coated with insulating material, such as indiarubber, tape, or tube, for at least 2 feet on each side of the support.

12. Bare wires passing over the tops of houses should never be less than 7 feet clear of any part of the roof, and they should invariably be high enough, when crossing thoroughfares, to allow fire-escapes to pass under them.

13. It is most essential that the joints should be electrically and mechanically perfect. One of the best joints is that which is whipped round with small wire and the whole mechanically united by solder.

14. The position of wires when underground should be efficiently indicated, and they should be laid down so as to be easily inspected and repaired.

15. All wires used for indoor purposes should be efficiently insulated.

16. When these wires pass through roofs, floors, walls, or partitions, or where they cross or are liable to touch metallic masses like iron girders or pipes, they should be thoroughly protected from abrasion with each other or with the metallic masses, by suitable additional covering; and where they are liable to abrasion from any cause or to the depredations of rats or mice, they should be efficiently encased in some hard material.

17. Where wires are put out of sight, as beneath flooring, they should be thoroughly protected from mechanical injury, and their position should be indicated.

N.B.—The value of frequently testing the wires cannot be too strongly urged. It is an operation, skill in which is easily acquired and applied. The escape of electricity cannot be detected by the sense of smell as can gas, but it can be detected by apparatus far more certain and delicate. Leakage not only means waste, but in the presence of moisture it means destruction of the conductor and its insulating covering by electric action.

#### III. LAMPS.

18. Arc lamps should always be guarded by proper lanterns to prevent danger from falling incandescent pieces of carbon, and from ascending sparks. Their globes should be protected with wire netting.

19. The lanterns and all parts which are to be handled should be insulated from the circuit.

#### IV. DANGER TO PERSON.

20. To secure persons from danger inside buildings, it is essential so to arrange the conductors and fittings that no one can be exposed to the shocks of alternating currents exceeding 60 volts; and that there should never be a difference of potential of more than 200 volts between any two points in the same room.

21. If the difference of potential within any house exceeds 200 volts, whether the source of electricity be external or internal, the house should be provided outside with a "switch," so arranged that the supply of electricity can be at once cut off.

By order of the Council.

F. H. WEBB, Secretary.

### THE ORIGIN OF ENGLISH ART SCHOOLS.

A LETTER has appeared in the *Staffordshire Advertiser* from Mr. George Statham on the origin of schools of art. He writes:—Early in life I had special opportunities for noting the influences which led to their establishment, and also of knowing and observing the labours of the pioneers in the movement that led to the action of Parliament and then of the Government. I feel, therefore, confidence in sending you the sum of my own reminiscences relating to the subject, which will show a difference respecting the origin of the school of art in England from that given by the hon. member for Lichfield at a recent meeting in that city. As in most other things now established, schools of art are the result of a process of many years. Soon after the subjugation of Napoleon, peaceful industry revived on the Continent, and, especially from France, our manufactures were subject to a competition they had been almost free from during the war, and the inferiority of our own in art and taste began to be very sensibly felt. Napoleon's acts in other directions than those which had roused and alarmed the world began to be noted and appreciated. "You have beaten him in the field," said Brougham; "try and rival him in the more important arts of peace." For several years Haydon took up the same theme, and worked at it with an enthusiasm which with some was accounted fanaticism. When the London University in Gower Street was being established he wrote to the projectors urging the teaching of art as of prime importance, offering to give his own services; but, as I heard him say in one of his lectures, "Shee said I was mad, and I was told it was not in the plan." Sir Martin A. Shee was then president of the Royal Academy. Haydon persistently importuned men of influence and leading members of the Government. "Do you think the people of England can ever be what you desire?" was the reply once of the Duke of Wellington. Haydon's answer was, "Yes, if you will give them equal facilities and similar schools to those on the Continent." In some directions the voice of Haydon was as "one crying in the wilderness," but in others a kindred



spirit was excited, which led, after a number of years of steady and patient effort, to the appointment of a Committee of the House of Commons, on the motion of Joseph Hume. Before that committee, Haydon, Martin, Reinagle, and Geo. Foggo, an eminent engraver, gave evidence, and also several foreigners, among them Dr. Waagen, M. Van de Weyer, the Belgian Ambassador, and others of note, from whom information respecting art schools on the Continent was gathered. The report of the committee was followed by the action of the Government, a Parliamentary grant was voted, and a school was started at Somerset House. It was at the close of the reign of King William that Parliamentary action was taken, and in the first years of that of the Queen that the arrangements were matured which resulted in the establishment of the school at Somerset House. This school was in full operation prior to the marriage of the Queen with Prince Albert, and influences were at work for starting schools in the provinces. If any names are held up for chief honour and remembrances in connection with the origin of schools of art the names of Haydon and Foggo will stand foremost; the former by his self-sacrificing enthusiasm in creating public opinion, and the latter by his steady, persistent endeavours which brought that opinion to a focus leading to effective action. As well as frequently hearing Haydon lecture, I heard Foggo also, and oftener, and his lectures were always illustrated with all kinds of manufactures—fictile, textile, metallic, &c. I vividly recollect his bringing the report of the Parliamentary committee I have mentioned to the London Mechanics' Institution and presenting it to the president, after quoting a newspaper article in which the whole movement was attacked, and Haydon, and Hume, and Ewart were ridiculed, and he himself was spoken of as "the foggy-headed individual before mentioned!" While I am disputing the "Royal" origin of schools of art, I may mention one fact which shows that the Queen's mother took great interest in the movement, and when Hume had succeeded in getting his motion for a committee passed she wrote to him congratulating him on his success. My brother-in-law was secretary to Hume at the time, and from him I heard of it directly afterwards. The Queen's mother was also the first to send money to Haydon when he was sent to Queen's Bench for debt. This occurred during a course of lectures I was attending, some of which had to be postponed in consequence. Of her sympathy he very feelingly spoke in the first lecture after.

## VENTILATION OF SEWERS.

A REPORT has been prepared by Sir Joseph Bazalgette, C.B., C.E., on the Sewerage of Brighton. It is preceded by the following retrospect of the results of some of the methods which have from time to time been suggested and tried for the better ventilation of the sewers of towns:—

The removal or treatment of the gases resulting from decomposition in sewers in an inoffensive manner is a subject which during the last half-century has received much consideration. When in 1850 I was conducting experiments on the ventilation of the sewers of London, I had the advantage of consulting with that eminent chemist, Professor Faraday, who had previously given much attention to the subject, and who, in his evidence before a Parliamentary Committee as early as 1834, had expressed the opinion that it was beset with great difficulties. Subsequently I visited some of the mines in the north of England and in Wales, in order to see how far any of the modes adopted for their ventilation could be applied to the better ventilation of sewers, and I became acquainted with most of the suggestions which have been made for otherwise dealing with the gases generated in sewers.

In 1858 a Committee of the House of Commons, consisting of Lord Palmerston, Lord John Russell, Lord John Manners, Sir Benjamin Hall, Mr. Robert Stephenson, and Mr. Tite, directed me to make experiments on the effect produced by extracting and burning the gases of sewers by means of furnaces. Those experiments were conducted with the furnace in the clock-tower of the Houses of Parliament, and I subsequently gave evidence before that Committee, to the effect that in the immediate neighbourhood of the furnace the indraught was found to be very strong, but that, whilst the supply of air was drawn with great force from the sewer inlets close to the furnace, the air current produced in the sewers at a short distance from the furnace was scarcely perceptible. The Committee of the House of Commons reported that, although such a process might be advantageous to sewers within a short distance of the furnace, it could not be successfully applied to any wide range of sewers, on account of the number of openings which unavoidably communicate with them, the nearest of which to the furnace would supply it with atmospheric air, whilst the gases in the further part of the sewers and house-drains would remain unaffected by its action.

In a mine there is but one downcast and one upcast shaft, and all the air brought into the mind at the downcast shaft can be directed and conducted at will, and discharged at the upcast shaft after it has passed through the whole length of the various galleries; whereas, in an ordinary system of town sewers, provided with inlets for the admission of water at every house-drain, gully,

and branch sewer connection, the beneficial effect of furnaces, fans, or air pumps, becomes limited to a comparatively small area; but wherever furnaces exist in the neighbourhood of sewers, it is nevertheless desirable to connect them with the sewers. In long lines of intercepting and outfall sewers, which have no branch connections or openings along their route, furnaces have been and may be used with the same beneficial results as in mines.

In 1866 Dr. Miller, F.R.S., and I conducted a series of careful experiments on the effect of ventilating sewers through charcoal, which extended over a period of twelve months and embraced a large drainage area. The sewers were cut off from all other means of ventilation, except through charcoal trays of various forms, fixed in the ventilators. We found that whilst dry charcoal is an efficient means of deodorising and disinfecting sewage gases, its introduction into the ventilators produced a sensible retardation of the current of air in the sewers, and the carbonic acid in them was increased on an average of our experiments from 106 to 132 per cent., and the mean temperature in the sewers was thereby raised from 50.8° to 56.2°. The beneficial effect of charcoal is, moreover, considerably reduced by moisture, and it therefore requires renewal at no very distant periods, varying according to the state of the atmosphere. Charcoal may be introduced with advantage into such ventilators as are the cause of any special annoyance; but, as they retard the current of air, their number and area would, if generally adopted, have to be increased to an extent which is for many reasons undesirable.

Shafts connected with the sewers and carried through lamp-posts in the streets, or to the tops of adjoining buildings, away from the chimneys and upper windows, might in many cases be so constructed as to ventilate the sewers efficiently, provided they were sufficient in number and in the area of their openings. But there is frequently much difficulty in obtaining the necessary consent for ventilators up the sides of houses on account of their having to be placed on private property.

The use of sulphurous acid and chlorine gas placed in ventilating shafts, and various other chemical or mechanical antidotes, have been attended with more or less beneficial results, and most of them may, under favourable circumstances, be applied in particular places with advantage; but all these modes of treatment require such constant attention and frequent renewal that they thus become liable to failure.

In order to prevent the evolution of noxious gases from sewage, the great object to be attained is its dilution and rapid removal, before decomposition has set in, by a copious supply of water, through sewers having sufficient falls to prevent the accumulation of deposits in them. Where these conditions cannot otherwise be sufficiently secured, the sewers should be kept clean by periodical flushing. Road detritus, if allowed to enter and deposit in the sewers, will accumulate and precipitate with it much of the sewage which otherwise would not deposit. The efficient scavenging of the surface of the roads and the interception of the detritus washed off them during heavy rains by properly-formed catchpits, are therefore essential to the maintenance of clean sewers. Macadamised chalk, or gravel roads, especially those having steep inclinations, require particular attention in these respects. In 1878 there were in the metropolis 1,700 miles of roads, of which about 1,000 were macadam or gravel, and from the surface of the whole were removed in one year over 600,000 cubic yards of detritus, at a cost of about 1s. per yard; whilst about 100,000 yards were removed from catchpits under the gullies, at a cost of 2s. 6d. per yard, and 20,000 cubic yards were taken from the sewers at a cost of about 25s. per yard. Thus it will be seen that effective scavenging and the construction of proper catchpits are economical as well as being advantageous to the condition of the sewers.

There are few who will not now recognise that the removal of the refuse of large towns by water is so vastly superior to any other known method as to have caused it to be an essential in these days of civilisation and refinement. But the underground carriers must be freely ventilated or the gases generated in them will escape into the houses, where, being shut up and but slightly diluted with atmospheric air, they are inhaled day and night, and become injurious to health and dangerous. It will be found upon close investigation that in the great majority of cases where persons have suffered from the effect of sewer gases, the mischief has arisen from defective house drainage and not from the public sewers. Every house drain should be formed of stoneware pipes, laid with sufficient fall to prevent the accumulation of deposit, and ventilated from its upper end to the roof of the house, but very few are so ventilated.

The gases escaping from efficient sewers ventilated on to the surface of the roads may nevertheless, in certain states of the atmosphere, be offensive in the immediate neighbourhood of such ventilators, and although no universal system of ventilation has yet been discovered which can be always applied without any inconvenience, some satisfactory mode may in every case be selected, according to the varied conditions of the localities to which it has to be applied. Attention to the foregoing principles of construction and maintenance of the sewers will very materially promote their ventilation without offence or injury.





Seaside Houses.

SIR,—The arrangements of ordinary lodging and “company” houses in towns at the seaside are too well known to need much description. They do not differ much in the disposition of the various apartments from houses in inland towns, viz., a basement storey (frequently occupied), ground-floor, first floor, second floor, &c. Sometimes there are other floors and attics, which are calculated to give the maximum of sanitary evils with the minimum of comfort, health, economy of space, or service. The limited area of the site on which one of the houses is built (except in some newly laid-out towns) rarely admits of an open space except a small yard at the back. The yard is generally approached by a lane, which serves for a double row of yards, running between the line of dwellings, and forms a narrow gullet in which air teeming with mischievous influences from the yards and basement storeys stagnates before it is admitted into the window opening when the sashes are opened for ventilation. The basement, when occupied, generally consists of a kitchen, scullery, dustbin, and other offices productive of dirt and offensive smells. By means of the kitchen fire and its long line of heated flues upward to the roof, a rarified state of air is produced in the lower portion of the house, a quick ascending current and indraught from the air of the back yards are inevitable. The result must be a more or less tainted atmosphere within the dwelling. Moreover, in order to utilise as many apartments as possible for the visitors, the administrative staff of the house frequently are huddled together in all sorts of corners, weltering in heat and fumes necessarily produced by culinary and other operations carried on in a close, damp basement storey. In this way conditions unsuited to health are induced from top to bottom of a house, and, without taking into consideration the insufficient closet accommodation which is usually mixed up with the apartments, I think we may safely conclude that a considerable percentage of disease is yearly engendered in seaside lodgings and other so-called health resorts. It follows that many, instead of being recruited, return (as the writer has done) to their homes with impaired health.

In one of the newest and most ambitious seaside towns I was struck by the liberal extent of the space surrounding all the houses, which are mostly semi-detached or in groups of three dwellings. But in the houses it is not uncommon to find a water-closet about 4 feet square on the landing of basement stair, enclosed by a mere screen 7 feet high and 3 feet from kitchen door, into which by in-draught this place is sure to be ventilated. The desire of the proprietor to afford ample space is frustrated in consequence, for a house surrounded only by open country would be dangerous under similar circumstances.

Having thus pointed out some of the defects of places to which so many every year turn with the hope of gaining health, I shall now briefly offer a few suggestions which, I think, would convert these houses into healthy homes.

The kitchen and culinary department should be removed from the basement storey or ground floor. In cases where the site affords no alternative, a basement should be retained only so far as is required for communication from a front to back area, foot of servants’ stair service lift, luggage-room, and a place to store coals, roots, dry ashes, and closed receptacles for vegetable dressings for periodical removal by dust-carts, and other local arrangements for the purpose. The entire administrative department closets should form an annexe separated by an air-way from main buildings, with windows opening on each landing for thorough ventilation and light. The annexe should contain on the ground floor (of a moderate-sized house) a small apartment for those who wish to smoke or write letters, water-closet, lift, servants’ stair and airway, tradesmen’s entrance, and luggage-lobby, brush-room, &c. On first floor should be half-landing from main stair, housekeeper’s room, housekeeper’s general store-room, butler’s pantry, water-closet, lift, servants’ stair, and airway. On second floor half-landing, housekeeper’s bedroom, servants’ bedroom, bath-room, water-closet, lift, servants’ stair, and airway. On third floor half-landing, kitchen, scullery, larder, housemaids’ closet, lift, servants’ stair, and airway. The service lift to communicate with each floor, for luggage and persons, also for kitchen stuff, coals, &c.; and from kitchen to each floor, ventilated through roof. The back stair and lift being for the exclusive use of annexe, there would be no unnecessary passing of servants into the main building. The household operations would thus be carried on outside the apartments of the visitors, who would, in consequence, be free from disturbance, artificial heat or unhealthy exhalations from kitchens, heated flues, or back yards. With windows at back as well as front, a continuously equable, agreeable, and invigorating atmosphere would be maintained throughout the day and night. The administrative staff would be released from drudgery in semi-lighted rooms, malarious smells, and damp, and placed in the free light and air at the top of the house. There would be free vent

for the escape of offensive emanations in the upper atmosphere above the roofs. As the stores required for kitchen use keep best in a dry, pure atmosphere, there would be less waste and decay, and consequent taint, in the larder, which would be placed only a few steps away from the operations of the cook. The house-keeper’s and servants’ bedrooms would be near their work; and the housekeeper’s room and dry store-room adjoining openings from lift and servants’ stair, would give a general control of all the operations of the administrative department and service of visitors’ rooms. By the concentration of offices economy of labour would be insured, and the wear and tear in carpets, dress, and furniture minimised.

For gentlemen visitors wishing to smoke, write and despatch letters, a small room in the annexe on the ground-floor is provided, with the necessary means of carrying up fumes to the roof, and thereby avoiding the nuisance to other visitors.

The structural arrangements of the house should, as far as possible, correspond with the requirements of time and place, such as overhanging roofs for protection from the heat-rays of the sun, damp, and cold; balconies sheltering under roofs, protected verandahs, &c.

In decoration and fitting up honesty of purpose should be the ruling principle, and sanitary considerations, such as light and cheerful tints in walls, floors, and furniture, bear priority in selection. A well-fixed colouring matter for ordinary walls, filling up the pores of the plaster so as to prevent gaseous absorption capable of carrying any tint such as recently introduced, might be applied decoratively in structural or art forms to meet the taste of the most fastidious, avoiding the sanitary objections raised to wall papers in general.

For all structural woodwork (whether framed in varying natural tints or plain wood) good varnish should be used, as some surface-tints absorb much light and others less; some reflect or increase light in the room, both in walls, furniture and floors. The choice should be for the least absorbent, whilst, by the opposite treatment, however æsthetic and in good taste, the same apartment may become dismal and depressing to invalids.

In conclusion, no considerations should, whatever class of house be erected, interfere with the reasonable principles of arrangement and construction such as I have endeavoured imperfectly to point out, the results of which I am sanguine would be that each house so treated would be in fact a convalescent home full of hope for all who seek health therein, and free from the “Spectre of Death” in the lodgings.

I am your obedient servant,

Lytham, Lancaster. F. S. SMITH, Architect.

ROYAL ACADEMY OF ARTS STUDENTS' CRICKET CLUB.

ARCHITECTS v. PAINTERS AND SCULPTORS.  
Played at the Erith Ground, July 8, 1882.

ARCHITECTS.

R. E. Smith, run out.....	60	C. Rea, run out.....	22
P. J. Popplewell, b Bates.....	41	A. Hemingway, c and b Bates.....	0
W. F. Keen, b Mason.....	5	D. W. Bellhouse, c Mason, b Bates.....	1
C. Burton, b Bates.....	35	W. Toogood, c Roberts, b Bell.....	6
E. J. Jackson, st Walton, b Bates.....	58	Extras.....	17
G. Blizard, b Mason.....	11	Total.....	285
E. Woodthorpe, not out.....	78		
T. Ward, run out.....	1		

PAINTERS AND SCULPTORS.

R. A. Bell, run out.....	0	G. G. Kilburne, b Popplewell.....	1
G. Walton, b Popplewell.....	0	A. B. Loud, b Keen.....	0
H. Bates, c Bellhouse, b Popplewell.....	60	J. N. Forsyth, not out.....	3
E. A. Mason, l-b-w, b Popplewell.....	3	T. Roberts, b Keen.....	0
F. Parker, b Popplewell.....	2	Extras.....	10
C. D. Richardson, b Popplewell.....	1	Total.....	85
C. W. Carey, run out.....	0		
H. Olivier, b Burton.....	3		

**Memorial Hospital, Eastbourne.**—The foundation-stone of this building was laid on the 5th inst. by Princess Christian. The hospital, which will be of the Queen Anne style of architecture, will consist of three blocks connected by corridors. On the ground floor of the central block will be surgery and operating-rooms, the housekeeper’s room, hall, kitchen, scullery, porter’s room, larder, and pantry. At the rear will be a large yard with the usual offices, and on the first floor of this portion of the building there will be bedrooms for the nurses. The wings on either side will contain respectively the men’s and women’s wards, the accommodation provided in each being six beds. These wings, which will consist of only the ground floor, will be capable of extension should necessity arise. The entire length of the building will be 164 feet, and its width 82 feet. It is contemplated that the hospital, the contractor for which is Mr. W. Gregar, of Stratford, will be completed, in March next. The architect is Mr. T. W. Cutler, Queen’s Square, Bloomsbury. The site, which is about an acre in extent, was given by Mr. C. Davies Gilbert. The building will cost about 5,000*l.*



### CHURCH BUILDINGS AND RESTORATION.

**Lincoln.**—The Church of St. Mary Magdalene has been re-opened after undergoing restoration, which has been carried out under the direction of Mr. G. F. Bodley, A.R.A. A new vestry, with organ-loft over, has been provided on the north side, and tower and belfry at the north-west. The floors have been renewed and tiles laid in the aisles. The chancel floor has been laid with Hopton wood, stone and slate. The contractors for the work were Messrs. Martin & Sims, of Lincoln.

**Leeds.**—The memorial-stones of a new Wesleyan chapel, Crossgates, have been laid. The chapel, which will cost about 800*l.*, is being erected from the designs of Mr. G. F. Danby, architect, of Leeds, the style adopted being Gothic. The structure will be erected of pressed bricks, with stone dressings. The roof will be open-timbered; the whole of the interior woodwork of pitch pine, varnished. The works are being carried out by Messrs. Marshall & Sons, of Crossgates, and Messrs. Tomlinson, of Leeds.

**Bucknall.**—The old parish church of Bucknall, between Bardney and Horncastle, has been reopened. A considerable amount of rebuilding has been necessitated by the ruinous condition of the structure. The contractors for the works were Messrs. Walter & Hensman, of Horncastle.

**Fownhope.**—The church of St. Mary, Fownhope, has been re-opened after works of renovation, carried out under the direction of Mr. Thomas Nicholson, Diocesan architect, Hereford. The contractors for the work were Messrs. Stone Brothers, of Fownhope. Among the works, the plaster and colouring have been removed, and the masonry exposed and pointed; the floor of the nave and aisle has been lowered, the roof renewed and the pews replaced by handsome open pitch-pine seats. The seats are placed on new blocks; the flooring in the church paved with Godwin's encaustic tiles in the chancel, and mixed encaustic tiles in the nave.

### NEW BUILDINGS.

**Carriage Works, Marsden.**—The second contract for the new works for the Metropolitan Railway Company is approaching completion. There are four buildings—viz., permanent way shop, 325 feet long, 50 feet wide, 25 feet high; builders' workshop, 282 feet by 50 feet by 35 feet; locomotive shops, 260 feet by 198 feet by 35 feet; engineer's offices, 100 feet by 46 feet by 35 feet. The first brick was laid on January 25, 1882. Nearly three millions of bricks have been laid up to the present. The total cost will be about 60,000*l.* The bricks were supplied by Mr. H. Odell; the ironwork by Messrs. Stanley, Hall & Co.; lime by Messrs. Greaves, Bull & Lakin; and stone by the Howley Park Stone Company. The general contractors are Messrs. B. N. Smith & Sons, of Birmingham.

**Cork.**—The foundation-stone of a new home for the aged was laid by the Right Rev. Dr. Delaney, Lord Bishop of Cork, on July 2. The new building will be nearly 300 feet long, and will accommodate 250 old people. The cost will be about 16,000*l.* The architect is Mr. D. J. Coakley, A.R.I.B.A., 48 Grand Parade, Cork; and the builders, Messrs. E. & P. O. Flynn, Cork.

**Wolverhampton.**—The directors of the Wolverhampton and Staffordshire Banking Company have determined to enlarge their banking premises in Lich Gates by erecting another front, facing the new street, on a piece of land they have bought from the Corporation, and the work has been begun by Mr. H. Lovatt, contractor, Darlington Street, from the plans of Mr. T. H. Fleeming, architect, Waterloo Road, Wolverhampton. The elevation and style of the additions are to be in character with the present buildings, and the frontage will correspond with the one now facing St. Peter's Church.

### ARCHÆOLOGY.

**Discoveries in Gloucester.**—In the course of the excavations for the Co-operative Stores the following relics were dug up:—Copper coin: Anglesey mines halfpenny, 1788. A quantity of refuse, probably from glass melting-pot, of greenish-blue colour, much oxydised, with nodules of silica. Remnant of crucible in which silver has been melted; particles of silver embedded. A quantity of shards, dating probably from the fifteenth century. Fragments of encaustic tiles, ornamental and plain, dating from fourteenth and fifteenth centuries. Fragments of delf stoneware, quart pots, &c., of fine blue colour; initials A. R. (Queen Anne) and G. R. (Prince George of Denmark, her husband) existing on some fragments. Pint-pot, stoneware, upper part painted red, lower part enamelled; on enamelled part is, very spiritedly painted, a fox (in blue colour), with the legend, "We shall catch him anon." Portions of brown stoneware cups, quart and pint; the name of "Hodack" is stamped on one pint cup. Remains of glass Dutch flasks; one, tolerably perfect, bears a crest (a dog's head) stamped thereon; the oxydation on some fragments is very beautiful. Portion of terra-cotta dish, painted inside a beautiful light blue, with portion of (qy.) head of Charles I. in dark blue,

with yellow crown. The head has the characteristic long hair of Charles I. Freestone head of infant Christ, of thirteenth-century workmanship; the carving finished on one side only, the other side having evidently been against a Madonna; remains of gilding existing on hair. Old glass phial and glass bottle. Enriched classic moulding in white marble. Two ancient earthenware pots. These relics are in the possession of the architects, Messrs. Medland & Son, but will be offered to the County Museum.

### ART WORKMANSHIP.

**Church Decoration.**—Some special works of decoration have lately been carried out in the church of St. Columb, at Holywood, near Belfast. These works have been executed from the designs of Mr. W. T. Beane, of Great Marylebone Street, London. The style of decoration is a combination of Celtic and Mediæval ornament, the Celtic forming a prominent feature. The decoration in the chancel takes the form of a dado or arcade corresponding with the architectural style of the building, which is Romanesque. The spandrels and frieze of the dado are of purely Celtic ornament founded on examples of ancient Irish art as illustrated in Petrie's "Round Towers of Ireland." Above the dado the walls are covered with conventional arabesques of passion flowers, sprays and tendrils, on a groundwork of rich vellum tint. Around the chancel windows and under the carved stringcourse are inscriptions in Celtic characters. The panels of the ceiling are coloured a pale blue with gold stars. The high altar and reredos are of a rich cream colour. The reredos contains six panels, representing respectively the Blessed Virgin, the Four Evangelists, and St. Columbkille. The saint is depicted in a white habit and cowl; he holds the short Irish crozier, and at his feet is a bell emblematic of his office as abbot. The bell is designed from the original bronze bell of Cromgall, now in the possession of Captain McCance of Cliftonville. The decoration over the chancel arch represents the scenes of the Crucifixion, executed in outline on a diapered background harmonising well with the detailed ornament of the arch, which is Celtic.

**Reredos.**—A new reredos, designed by Mr. Bassett Smith, of the Adelphi, has been erected in the church at Great Bealings. It is composed of three panels divided by small buttresses and alabaster columns, moulded base and capitals, with tracery and crocket work, and pinnacles in relief. The panels are enriched with mosaic work. The style is Early Perpendicular. The carving is conventional.

### GENERAL.

**The Rev. J. C. Robertson**, the librarian of Canterbury Cathedral, died on Sunday last, in his seventieth year. He was a recognised authority on the history of the cathedral.

**Professor Legros** has presented his painting of *St. Jerome*, which was in the Royal Academy Exhibition last year, to the Manchester Institution.

**Mr. Jonathan Pratt**, Honorary Secretary of the Royal Birmingham Society of Artists, has been appointed Honorary Curator of the Birmingham Corporation Art Gallery in the place of the late Mr. Everitt.

**Mr. J. C. Traylen**, architect, of Peterborough, who has succeeded to the practice of the late Mr. Edward Browning, Stamford, has been appointed Diocesan Surveyor for the archdeaconry of Oakham.

**Mr. Banister Fletcher** has let an estate comprising rather more than four acres by tenders to Messrs. Smith & Goodman, and the Court of Chancery having approved the terms, the roads are being made and the houses built. This will add about 120 houses to the great number now being erected around London.

**The Birmingham School Board** have ordered 1,000 combination desks and seats from the Midland Joinery Company for the new schools in Icknield Street, Foundry Road, and Laxton Street. The architects are Messrs. Martin & Chamberlain.

**A Convention** of the American Institute of Architects will be held in Cincinnati on October 25.

**A Church** is about to be erected at Small Heath in memory of the late Dr. Oldknow, from the designs of Mr. A. E. Dempster, architect, of Temple Row, Birmingham.

**A New Building** of glass and iron is to be erected in Berlin on the site of one intended for the Hygiene Exhibition, which was recently destroyed by fire.

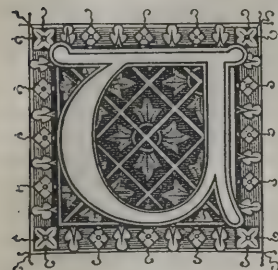
**Alterations and Additions** are being made to the Old Trafford Blind Asylum, Manchester. Mr. Charles Heathcote, Princess Street, Manchester, is the architect, and the works are let for 2,281*l.* to Messrs. Wilson, Toft & Huntley, contractors.

**The New Hospital** at Hope, for the Salford Union, is approaching completion. It was designed by Mr. L. Booth, F.R.I.B.A., and the contract amount is 43,480*l.* The wards and day-rooms are warmed and ventilated by means of the patent Manchester grates of Mr. E. H. Shorland, to which a silver medal was awarded at the recent Smoke Abatement Exhibition, South Kensington.



# The Architect.

## THE SMOKE ABATEMENT MOVEMENT.



UNDER the presidency of the Duke of WESTMINSTER, and at his Grace's residence, Grosvenor House, a meeting was held on the 14th instant which ought to have been of some practical importance, having indeed for its object nothing less ambitious than to awaken the interest of the influential classes in an organised enterprise for the abolition of our abominably intimate acquaintance the London fog. A "society" of the customary kind has been established to promote the purpose in view, under the modest name of "Smoke Abatement." Patronage of the highest social order has been obtained, as is evidenced by the demonstration at Grosvenor House. Scientific patronage of equal weight, so far as names go, has been also secured. An "exhibition" of the regulation order has been held, and medals have been awarded. The chief business of the assembly at the Duke of WESTMINSTER'S was the formal presentation of these medals by the gracious hand of Lady GROSVENOR. And if all this is very gratifying, and indeed highly promising, we have only to express the hope that the London atmosphere will speedily be cleansed—as, for a good example, the London river, once so nasty, has unquestionably been—and the infamously famous yellow fog relegated to the category of exploded superstitions. Our young people already can scarcely anyhow imagine how exceedingly unpleasant the habits of good old Father Thames used to be; and we begin to hope that the youth of the twentieth century, and possibly of the first half of it, may be in like manner unable to believe the representations of to-day respecting the melancholy conversion of honest metropolitan air into pea-soup.

Perhaps it is only because the enterprise before us, like all enterprises whatever, must begin at the beginning; but the fact is plain that the abolition of our atmospheric poisoning has as yet attained no farther than the encouragement of those manufacturers of stoves and furnaces who profess to deal with what is called smoke consumption, or more properly, perhaps, smoke prevention. The recipients of the medals last week were in fact precisely the same persons whose names have been advertised for so many years past as trade competitors for the supply of the market with grates and stoves and so forth "on improved principles." So forcibly would this circumstance strike the mind of a stranger, that it must have been difficult with many to resist the impression that no progress whatever is being made in any new direction. All "improved principles" in the trade of stove-making have for their object in one way or another the diminution of the waste of fuel; and as waste of fuel is always identified, rightly or wrongly, with the production of smoke, the general idea of the matter is that any new contrivance in the form of a stove must necessarily have for its object the philanthropic endeavour to make less smoke, and probably to "consume" or burn up in some way, as it it were in fact floating fuel, whatever smoke may in spite of the contrivance be still produced. Accordingly, as we have hinted, the problem how to dispose of the London fog is for the present confounded with the invention of improved stoves.

But we submit that such a view of the question is one that cannot long keep its hold upon the public mind. True, there is a vast deal of smoke sent up into the air from our chimneys, and not in London alone. The use of raw pit-coal for fuel in the delicately-appointed rooms of elegant and fastidious people seems on the face of it to be a gross vulgarity in science, a barbarous anachronism, a piece of domestic conservatism scarcely to be accounted for by men of cultivated understanding. Even amongst the poor, as a mere point of economy, the practice looks very like a reckless blunder; one of the many little blunders which the poor have not time to attend to. None the less, when we see factory chimneys belching forth enormous volumes of thick black Stygian soot, does it seem as if, in the hurry-scurry of his day's work, the very engineer himself were behind the age a couple of hundred years or so. We are fully disposed, therefore, to give all

honour to the ingenuity which seeks to ameliorate so backward a state of things. Still, what we venture to propose is that the matter in hand should be carried farther than this, and a good deal farther, and on a different line of thought altogether.

Ingenious stoves and grates, non-producers of smoke, consumers of smoke, and so forth, are, to say the least, obviously not for the many—the many who make the smoke. In other words, if the upper ten or twenty thousand who can afford the money to buy such scientific instruments, who can keep the servants to look after them, and who can pay the ironmonger's bills for their repair, had their chimneys all told and their smoke all measured, the aggregate would be but in proportion small, even if the least "improved" apparatus were universal. The thick yellow darkness of the atmosphere in London and some other great towns is not found to be generated in the fashionable neighbourhoods, but in the humbler districts where the bulk of the community is collected in confined quarters and amidst numberless elements of smoke production peculiar to the localities. How, then, are the many clever varieties of apparatus in question to solve the problem of smoke abatement with any practical efficiency? Grant that all round London just now the stoves and ranges of even the speculating builder are better than they used to be, and grant to the full the improvement thereby creeping into operation, is it not still to be said, not only that the movement is exceedingly slow, but that the effect is only local, and indeed chiefly temporary? What is wanted appears to be—and the notion is by no means a new one—some mode of dealing with the old apparatus, rather than the mere contrivance of new. This, we say, is not in any way a novel proposition; it has been before the public for many years; and yet nothing at all seems to be doing to meet the case in any form or degree.

Of course there will be those who explain such a circumstance by observing shrewdly that the profit accruing to the inventors and manufacturers of simple appliances to be attached to old grates for the avoidance of smoke would be all too small for their trouble; but we prefer to challenge the skill of the inventor, and not the liberality of the trader. Take the case of a recent notification issued by a professedly patriotic gas company, to the effect that they are prepared to supply at a rental, for the use of private houses, certain stoves and grates which operate by means of gas in place of coal. Of what service is this to the smoke-producing public? We cordially agree that gas-heating and gas-cooking *ought to be* cheaper as well as more cleanly than coal-heating and coal-cooking; but are they so? And if they were only no dearer, how is a householder to be persuaded to throw aside his stoves and range and pay a remunerative rent for others? The fact unquestionably is that the gas companies, if they would do their duty as monopolists towards a long-suffering and indeed not a little scandalised public, could quite easily avail themselves of the resources of science in such a way as, in the first place, to apply gas to every old grate and kitchen range in London; in the second place, to reduce their own charges almost to half the existing rates; and thirdly, to economise the consumption so that the cost of raw coal shall be unrecognisable in the altered account. As an illustration of what the resources of gas-engineering are, we may be permitted to repeat the story that is told of the reason why on certain occasions our gas-flames are so yellow instead of so white, while the more yellow they are the more persistently do they "roar." The story runs thus—we hope it is a wicked story—that when the supply of gas in stock happens to run short, the remedy is to let in a quantity of atmospheric air to make up the deficiency, and then to put on a greater pressure in order to overcome a natural and praiseworthy reluctance to move on which the adulterated fluid manifests in such circumstances; so that the public are enabled to consume at once the inferior quality and the greater quantity. We will only say, if ingenuity can operate so successfully in one direction, why not in another?

The London fog, we need scarcely repeat in this journal, is not caused by smoke alone. That which makes the throat and eyes smart as they lamentably do is in almost a greater degree the *town sweat*, not omitting the venomous vapours of sulphuric acid, nitric acid, ammonia, and other ungenial chemicals, which are the necessary concomitants of town life and trade. But the abatement of smoke, if it could be attained in an adequate degree, would doubtless go a great way, not only in the amelioration of the distressing state of things which prevails every winter in London, but, what is of equal im-



portance, in the cleansing of the very summer air. Let us press the question, however, whether the invention of new stoves is enough; indeed, whether it is of any practical effect at all. We feel that we can scarcely be wrong in calling upon the world of inventors to try an entirely different line of inquiry: we do so with all respect, but with all earnestness. We do so, let us add, with all confidence.

### ANCIENT CHARGES AGAINST PHEIDIAS.

ON the last occasion of his distributing the prizes to the students of the Royal Academy, Sir FREDERICK LEIGHTON chose as the subject of his address the question whether a strict moral sense is a necessary part of the character of every artist; or, as he put it, the problem of the relation of art to ethics. His own opinion was that "whilst art is indeed in its own nature wholly independent of morality, and whilst the loftiest moral purport can add no jot or tittle to the merits of a work of art as such, there is, nevertheless, no error deeper or more deadly . . . than to deny that the moral complexion, the ethos, of the artist does in truth tinge every work of his hand, and fashion in silence, but with the certainty of fate, the course and current of his whole career." Or again, "We have seen that whilst the inculcation of moral and religious truth must be admitted not to be the object of art as such, nor moral edification its appointed task, it is not therefore true, as some would have us believe, that the artist's work is uninfluenced by his moral tone, but rather that the influence of that tone is, in fact, upon it and controls it from the first touch of the hand or chisel to the last." Unfortunately the records of the lives of artists sometimes present a very different side to the question, even in cases where the true greatness of the artist is beyond all manner of doubt. Such, for example, is the case with the great Athenian sculptor, PHEIDIAS. But does it follow that the records are accurate? And, in general, is it not our first duty to probe every such record to the bottom?

In B.C. 438 PHEIDIAS finished his colossal gold and ivory statue of *Athena* in the Parthenon. The expenditure—not on it only, but also in the erection of the Parthenon and other buildings—had been very great, and it was not strange that there should arise among the public a disposition to blame PHEIDIAS and his friend PERIKLES, whose business it was to control the expenses in this direction. In this state of the public mind a former assistant of PHEIDIAS, named MENON, appeared on the scene, charging him with having appropriated part of the gold supplied to him for the statue. As it turned out, however, the gold had been so employed on the statue that it could readily be removed and weighed, the result of which process showed that PHEIDIAS was entirely innocent of the charge. Such appears to have been the first and only charge ever made against him, when all the tales that in after-times grew up around it are swept away. To sweep them away is no easy task, as Mr. MÜLLER-STRÜBING has recently found. His elaborate article \* on the subject is of the greatest interest.

It is easy to understand how a subordinate like MENON may have been puzzled to account for the care which he saw being taken to plan the golden drapery of the goddess so that it could be removed at any time. Possibly he was not aware that the gold so employed was part of the sacred treasure, and had constantly to be accounted for as exactly as loose gold would be by the outgoing treasurers to their successors. Had it not been removable, each succeeding set of officials must have taken its value on the faith of their predecessors. It is strange, no doubt, that there was so little faith shown in the matter, and very probably there were other reasons at work as well. So large a quantity as 44 talents of gold would not perhaps have been safe in a future emergency; and unless the statue had been so planned that this gold could be removed without in reality disfiguring it, a spectacle might have presented itself which would have been anything but agreeable to the Athenians in their hour of need. As it was, when the gold was removed there was left still a draped figure of the goddess, probably in wood.

We could imagine an artistic proceeding of this kind to have been in itself sufficient to give rise in later times to a variety of popular tales clinging to the name and fame of PHEIDIAS, as often unscrupulous as not. The misfortune was that in his own time it provoked the charge we have mentioned.

For there can hardly be a doubt that it is to it that ARISTOPHANES refers in his play of the "Peace" (v. 605), which was produced at Athens in B.C. 421—that is, about seventeen years after the finishing of the statue of *Athena*. His ancient commentators are explicit on the point. But they are not content with this; nor is PLUTARCH in his life of PERIKLES. They all seem to have thought that so serious a charge must have had some other ending, and accordingly they proceeded to search the older literature. PLUTARCH found that the charge of appropriating the gold having failed, PHEIDIAS was next indicted for the offence of having introduced among the Greeks fighting with Amazons, on the shield of the goddess, portraits of himself and of PERIKLES. At the conclusion of the trial PHEIDIAS went to prison, and died there, while MENON, the informer, was publicly rewarded. To PLUTARCH's mind it is evident that the one charge had followed the other immediately, and since he must have known that PHEIDIAS had spent some six or eight years at Olympia making the statue of *Zeus*, after he had finished the *Athena*, he must have supposed that this double trial had taken place after the return of PHEIDIAS to Athens. But we know from an ancient chronicle of events that the trial for appropriating the gold took place when the statue was finished, in B.C. 438, and that PHEIDIAS thereafter proceeded to Olympia to accomplish his great work there; so that if he ever was charged with impiety as regards these portraits, and punished with imprisonment which led to his death, it must have been after he had completed his task at Olympia.

But this story of the portraits had a fascination in antiquity. Why, it was asked, were not the objectionable portraits removed from the shield? To this the answer was: PHEIDIAS had cleverly contrived that they could not be taken away without bringing down the whole statue! Thus in the one story the whole gold of the statue could be removed without injury, and in the other not even a small piece of the relief on the shield could be touched without a collapse. The curious thing is that the inventor of the story should have thought of portraits as a principal element in it—the more so since, according to PAUSANIAS, portraiture was so far from the manner of PHEIDIAS. It reminds us of the tale which PLINY has preserved of the two architects BATRACHUS and SAURAS, who being denied the right of inscribing their names on the portico of OCTAVIA, which they built in Rome, attained their end by making on the bases of the columns a figure of a frog (for BATRACHUS), and of a lizard (for SAURAS). PAUSANIAS must have been familiar with the shield of the goddess at Athens—he refers to it more than once; and yet he mentions the figure of PANTARKES at Olympia as the only instance he knew of a portrait by PHEIDIAS. More than that, he states in one place that the shield of *Athena* was copied by artists, whom he names, for a statue they were employed on; and it is neither likely that they would have copied the portrait of PHEIDIAS, nor probable that PAUSANIAS would have omitted the fact had they done so.

The figure of PHEIDIAS, as it appeared on the shield, was that of a bald-headed old man, says PLUTARCH, who doubtless knew that PHEIDIAS had lived to an advanced age. But he can hardly be supposed to have reached this stage of life at the time of his finishing the *Athena*; or rather we should say, it can hardly be conceived that a bald-headed old man should have still before him the greatest work of his life, the statue of *Zeus* at Olympia. On the other hand, it is possible that he had left the shield of *Athena* undecorated, just as he had left the shield of the famous bronze statue of her on the Acropolis, and had, on returning from Olympia, completed it in the objectionable manner which brought him to prison and closed his career. But on that theory we should have to suppose that the calling of him to account for appropriating the gold, or the ivory as others say, was also put off till his return, and this we know was not the case. Nevertheless, the narrative of PLUTARCH is confirmed by a marble shield in the British Museum, which appears to be a copy from the shield of the *Athena* made by a rude and unskilful hand in a late period of antiquity. There we see PHEIDIAS figured as a bald-headed old man swinging over his head a battle-axe—not raising a stone as PLUTARCH says—to strike an Amazon: the figure of PERIKLES corresponds more closely to the narrative. There is no attempt to conceal the individuality of PHEIDIAS. Indeed, it is far too obtrusive, though that, perhaps, could be accounted for by the desire of the copyist to emphasise the story of the portraits. Clearly the man who made this shield had the same source of information as PLUTARCH, but it

\* In Fleckeisen's "Jahrbücher," 1882, pp. 289-340.



does not follow that the shield of PHEIDIAS was that source. Admitting, however, that PHEIDIAS had introduced among the figures on the shield resemblances to himself and to PERIKLES, we need not therefore believe that they could not be removed without bringing down the statue, that he had recourse to portraits because he was not allowed to inscribe his name on the statue, or that he was punished so severely. About the whole affair there is an atmosphere of confusion and credulity. ARISTOPHANES in the "Peace," probably reproducing the common belief of the time, says that PHEIDIAS had got into trouble, and that PERIKLES, fearing it would also overtake himself, got a decree passed against the Megareans, with the design of escaping public censure amid the turmoil which would arise. The ancient commentators on ARISTOPHANES add a note that the trouble of PHEIDIAS here referred to was his being charged with having appropriated part of the ivory—as one says, part of the gold according to another—supplied to him for the statue of *Athena*. Accepting two clever emendations of Mr. MÜLLER-STRÜBING, we next read in the note in question that, "having been acquitted, he went to Olympia, and there, having completed the statue of *Zeus*, died highly-honoured by the people of Elis." We know, in fact, that his workshop at Olympia was maintained as he had left it for sightseers in after-ages, and that his descendants held the office of keeping the great statue in due order. Yet how different the unaltered and unexplained statement of the commentators! There we find PHEIDIAS condemned at Athens, escaping to Olympia, again condemned by the Eleians after having made the statue of which they were so proud, and finally executed by them. It is a great relief to have these tales swept away.

#### POLYCHROMATIC DECORATION.\*

AT a time when the guardians of English churches were beginning to revel in the beauty and fitness of white-wash for mural decoration ADDISON was speculating on the possibility of the colour sense, and it alone, surviving all the transformations which follow death. The other images which the senses are supposed to receive from matter might, according to him, be found to be delusions hereafter, but "the ideas of colours are so pleasing and beautiful in the imagination that it is possible the soul will not be deprived of them, but perhaps find them excited by some other occasional cause." This was written in 1712, but we have not yet reached the transcendental stage when colour can be esteemed to be worthy of immortality. Hitherto we have been accustomed to regard it as something that was better adapted to the requirements of foreigners than to our own. In painting we gave the preference to form, and in architecture we ignored colour altogether. Only thirty years have elapsed since there was an outcry when it was announced that the cast-iron columns and girders of the first Exhibition building in Hyde Park were to be painted in more than one colour, and it was prophesied that the structure must appear like a harlequin's suit, and that the value of the articles exhibited would be lessened in consequence. A more natural, and therefore a better, spirit now prevails, but we are still far from being duly sensible of the absence of colour from buildings, and especially from churches.

It must, however, be allowed that those who are not in favour of polychromatic decoration in churches have some reason on their side. There is in the first place the question of cost. Wall painting in this country soon fades, and therefore requires perpetual renewal. But in many a parish it is difficult to raise funds to keep the fabric of the church in a sound condition, and in such places no decoration which entails expense can be expected to meet approval. The advantage of introducing polychromy into old churches (unless where there is already evidence of the existence of colour) may also be doubted. The side-chapels of Notre Dame, which were painted under the direction of the late VIOLETTE LE DUC, are now the least venerable parts of the cathedral; and the striped columns in the old Paris church of St. Germain des Prés are not so impressive as the plain masonry of many an English church. Few men in our time have done more towards extending the application of polychromy than M. CHEVREUL; but even he was opposed to its indiscriminate introduction into old build-

ings. He tells us that after long reflection on the subject he came to the conclusion that there is nothing to surpass the play of light and shade on the natural surface of the stone on walls and columns, when varied by the rays which have passed through stained-glass windows. The vault of Rheims Cathedral was in his eyes more effective before it was painted blue and powdered with *fleurs-de-lys* for the coronation of CHARLES X. All this should be remembered by people who recommend colour decoration as if it were a simple matter. There is, too, another consideration. When work of this kind is proposed, it very often happens that it is not considered necessary to consult an architect. The decoration may be entrusted to some local tradesman, who is supposed to furnish a design, or the design may be prepared by a young lady or other amateur, who is not versed in the characteristics which distinguish styles and periods. We have heard of a case where a sharp undertaker secured the "adornment" of a chancel, having heard at a funeral that a memorial of a man he was burying was to take that form. Many of our readers could tell stories of a similar kind, and know by experience how painful it is to find their buildings debased by absurdities which are supposed to be decorative, and which they have no opportunity to repudiate.

Messrs. AUDSLEY are, of course, acquainted with the unsatisfactory conditions under which decoration is conducted in this country, and if the book of examples which they have lately issued is followed, much will be done towards minimising the evils which arise whenever work is entrusted to men who have not made a special study of the subject. The authors have explained the use which may be made of their book.

"It is not," they say, "intended for those who are already skilled and learned in the subject, yet to them it may occasionally prove useful by supplying hints. To students and younger members of the architectural profession, to decorative artists, and practical painters generally, it will form a valuable and suggestive book of reference, containing designs based upon ancient authorities for the characteristic ornamentation of the various portions of ecclesiastical and domestic buildings erected in the several styles of Gothic architecture. To those amateurs who amuse themselves by decorating their own dwellings, furniture, &c., or who lend practical help in beautifying their village or country churches, this work will be of great benefit, for it contains more hints and suggestive designs, systematised for their use, than can be found in all the works already published on the polychromatic decoration of mediæval buildings."

The authors, it will be seen, do not underrate their work. It would perhaps show better taste if they had left it to the public to decide, without dictation, whether the book was so valuable and superior, but in justice it must be said that they have only anticipated the general opinion. The book is, indeed, entitled to great praise, no matter in what way it is judged, and to others besides amateurs and novices it will be an acquisition.

In designs for polychromy there are two things to be considered, namely, the colours and the ornament. Messrs. AUDSLEY are opposed to the use of the primary colours in Gothic buildings in wall decorations, and they do not look with favour on the secondaries. In one place they say that red, blue, and yellow should be very sparingly used, although valuable in salient lines or points of effect when associated with the secondary mixed or low-toned colours. In another place it is explained that, with the exception of a red approaching vermillion, the primaries and the secondaries (orange chrome and deep emerald green) are absent from the plates. Again we find it stated that "the use of pure or positive colours in mural and other decorations is much to be condemned, especially in ecclesiastical structures and domestic buildings in the mediæval styles. Such garish pigments as vermillion, ultramarine, emerald green, and the chrome yellows, have during late years been freely used, to the utter destruction of repose and artistic effect. Such works as the interior decorations of the Sainte Chapelle at Paris, and the modern church of Notre Dame de Bon Secours near Rouen, are examples of the injudicious use of crude and too brilliant colours, resulting in a garish effect in both cases." It will be contended that the finest decorations in the world depend for much of their success on the use of primaries. As OWEN JONES said, the primary colours are never vulgar or discordant when properly applied; the defect will lie, not with the colours, but with the want of skill of the hand that applies them. There is, however, less risk in the use of tertiary and mixed colours, and, besides, the general preference in our time is for quiet colours in dress and drapery as well as in

\* "Polychromatic Decoration, as applied to Buildings in the Mediæval Styles." Thirty-six Plates in colours and gold, with general introduction and descriptive letterpress. By W. & G. Audsley, Fellows of the Royal Institute of British Architects. London and Manchester: Henry Sotheran & Co. 1882.



pictures. It must not be supposed that the designs in Messrs. AUDSLEY'S book are made up of the muddy and doleful colours which are often found in modern decoration. The plates are bright and cheerful, and some may be even thought too brilliant for church work. The authors appear to have a preference for a ground of delicate chrome yellow, against which the figures in red, blue, brown, and gold, stand out effectively. The scheme of colour in every plate has been prepared with care, the combinations are often ingenious, and in cases which depend upon a self-colour the result is never commonplace. As befits Gothic work, gold is frequently employed.

The majority of the figures are intended to be produced by stencilling, and their character is determined by the process. They are all firmly drawn and are geometrical in their conventionalism. The patterns comprise varieties of "brick patterns," diapers, brocades, powderings, borders, bands, crests, medallions, spirals and zigzags, arcades, animals, &c. In fact, there is no kind of ornament adapted for a mediæval building which is not represented. But it would have been an advantage if the authors had suggested something about the scale of the figures. There is a limit to the effective enlargement of some patterns, and amateur decorators are apt to overlook this.

The plates have been lithographed in Paris, and it is hardly necessary to say that the execution of them is perfect. They form a series of examples in the adaptation of colour which may often be followed in other work besides mural decoration, and in other styles besides the mediæval. Messrs. AUDSLEY have carried out important works of decoration, and therefore they are presenting the results of experience, and not a piece of bookmaking. They say that the present work may be followed by another on mediæval decoration of a more advanced type, but we confess that we do not care to see examples of figure-painting produced to enable amateurs to amuse themselves on the walls of churches. Planting of that kind should always be entrusted to artists of position when carried out. Messrs. AUDSLEY would, however, render a service to many if they prepared a volume on Renaissance ornament in polychrome. There are no men in England more competent to undertake such a work.

### CAMBODIAN ANTIQUITIES.

IN the end of last year M. Delaporte went out to Cambodia, commissioned by the French Government and supported by that of Cochin China, for the purpose of exploring further the mysterious and gigantic architectural remains which abound in Cambodia, the origin and purpose of which have so exercised archæologists. M. Delaporte was accompanied by a large staff, and on his arrival at Phnom-Penh, the capital of Cambodia, proceeded directly to the celebrated ruins of Angkor. These he examined with great minuteness, and, according to a statement just published, believes he has been able at last to solve the difficult problem of the purpose of the religious buildings of this ancient metropolis of Indo-Chinese civilisation. His discoveries have led him to the interesting and unexpected conclusion that these ancient Khmer temples were dedicated to Brahminism. At Angkor-Wat he detached from the higher parts the *chefs-d'œuvre* of Cambodian sculpture: bas-reliefs, once brilliantly gilt; pediments, all the subjects of which M. Delaporte maintains, down to those which decorate the most secluded sanctuary, are devoted to the exploits of Rama and the glories of Vishnu. At Angkor-Tom, M. Delaporte visited several new monuments, on most of which he also finds on the principal pediments the exploits of Rama and Vishnu. He believes he has proved the presence of the *lingo*, the emblem of Siva. He cleared of rubbish and explored the ancient palace of the Khmer kings, a work of magnificent and wonderful sculpture, the rising terraces of which are adorned with superb compositions in bas-relief; the enormous three-headed elephant, Iravâti, is here enthroned in all the places of honour, as at the angles of all the gates of the city, where he is shown by the god Indra, accompanied by two *apsaras*, or celestial *danseuses*, of his paradise. M. Delaporte had already collected 300 photographs, forty mouldings, and a small number of original specimens of great value, when he and some of his staff were compelled to return to Saigon in ill-health; thence M. Delaporte sailed for France. The work of excavation and exploration has, however, been carried on by a substitute in the absence of M. Delaporte. Since the latter's departure much additional work has been done in photographing, moulding, and collecting specimens. The detailed results of this fresh work on these celebrated ruins will be looked for with interest by archæologists. A Brahminical origin has never been attributed to them, though a solution has been sought both in Buddhism and serpent-worship.

### THE PAROCHIAL POSITION OF THE HOUSES OF PARLIAMENT.

ON the 13th inst. Mr. Justice Chitty delivered judgment in the case of *Combe v. De la Bere*, which is better known as the Prestbury Ritual Case, and has been before the courts since 1874. Sentence of deprivation of his cure in the diocese of Gloucester and Bristol had been pronounced against the defendant by Lord Penzance. One of the objections raised against the sentence was that his lordship had pronounced it in committee-room E of the House of Lords, which formed part of a royal palace and residence, and was therefore outside the province of Canterbury and exempt from the ecclesiastical jurisdiction.

Mr. Justice Chitty said it appeared from the sentence itself that it was signed and promulgated by Lord Penzance, as Official Principal of the Arches Court of Canterbury, "in committee-room E of the House of Lords at Westminster." It was a principle of law that a judge who had only a local jurisdiction must exercise his jurisdiction within the locality over which it extended. If committee-room E of the House of Lords was not within the province of Canterbury, a prohibition ought to go against further proceedings under the sentence. It was remarkable that Lord Penzance, sitting in committee-room E, on the hearing of an application in the course of the proceedings in the first suit on January 10, 1878, himself raised the question whether he could lawfully exercise his jurisdiction as Dean of the Arches in that place. After some slight discussion, he stated (according to the shorthand notes produced in the present proceedings) that he would consider the matter, and that, if necessary, the case should be brought on before him in some other place. So far as appears, the subject then dropped, and was not subsequently called to his attention, and he had not therefore had the advantage of any expression of opinion on the part of that learned judge on the point, except that he did, when pronouncing the sentence in question, actually sit in the same committee-room. It was upon two grounds argued that this committee-room was a place exempt from the jurisdiction of the Arches Court—first, because it was not within the province of Canterbury, being within a royal peculiar exempt from the Archbishop's jurisdiction; secondly, because it was within the royal palace of Westminster. The gist of the argument was taken from the resolution in *Nyerford's* case, stated by Lord Coke in the 3rd Inst., p. 141, to the effect that the King's palace at Westminster was a place exempt from all jurisdiction of its ordinary, as well by reason of the royal dignity and Crown, as of the liberty of the Church of Westminster, and particularly in the presence of the King during the holding of Parliament there, so that no citation or summons could be lawfully served there. This resolution was come to in a suit in which the King and the Abbot of Westminster and certain officers of the King were prosecutors. The case was more fully stated in "*Prynne's Parliamentary Writs*," 1189-1198. The case of *Bogo de Clare*, mentioned in the 4th Inst., 23, and also more fully stated in "*Prynne's Writs*," 819, was to the like effect. As to the first ground, it was proved by evidence put in on the part of Mr. De la Bere that the whole of the Palace of Westminster was locally situate within one or other of the two parishes of St. Margaret's and St. John's, Westminster. In the appendix to the "*Valor Ecclesiasticus*," as printed by royal command in 1810, there appeared a certificate, under the hand of the Bishop of London, which was admitted to be correct, that the rectory of St. John the Evangelist, Westminster, and the curacy of St. Margaret's, Westminster, were "*peculiar*" subject to the jurisdiction of the Dean and Chapter of Westminster. This jurisdiction had apparently belonged in former times to the Abbot of Westminster, and had passed to the Dean and Chapter at the Reformation. The monastery, being a royal foundation, was apparently a royal peculiar, but, according to the record in *Bogo de Clare's* case, had become subject to the jurisdiction of the Pope, and as such subject ecclesiastical to the immediate jurisdiction of the Crown as head of the Church. This fact appeared from the statement in page 557 of the appendix to the report of the Ecclesiastical Commissioners of February 15, 1832. It was an important fact that the certificate of the Bishop of London and the appendix to the Commissioners' report, which purported to give an exhaustive list of all peculiars within the ambit of the diocese of London, did not specifically mention the Palace of Westminster, the reason being that the palace was locally situate within one or other of the parishes of St. Margaret and St. John. There was no ground whatever for saying that there was any ecclesiastical jurisdiction within the palace at the time of the passing of the statute 6 and 7 William IV., cap. 77, except that already mentioned. It was true that within the old palace there formerly stood the chapel of St. Stephen, reputed to have been founded by King Stephen. The dean and canons of the chapel were incorporated and endowed by royal charter by Edward III., and apparently became a royal peculiar. But the corporation was dissolved at the Reformation and its property granted away to subjects, except the building of the chapel itself, which fell to the Crown and was used from about that time by the Commons as their House, until it was burnt down in 1834. All ecclesiastical jurisdiction arising in respect of St. Stephen's chapel ceased at the Reformation. In that state of things the statute of 6 and 7 William IV., cap. 77, was passed, one



of the objects of which was to put an end to the confusion which had arisen in ecclesiastical matters by reason of the existence of peculiars. There were, as appears from the report of the Ecclesiastical Commissioners, upwards of 300 of such special ecclesiastical jurisdictions in England, including royal peculiars, of which there were 11. The Commissioners recommended the abolition of all peculiars. By the 10th section of the 6 and 7 William IV., cap. 77, the Ecclesiastical Commissioners were directed to prepare and lay before the king in Council such scheme as should appear to them to be best adapted for carrying into effect certain recommendations in their report, and in particular it was provided that "it shall be competent for them to propose in any such scheme that all parishes, churches, or chapelries which are locally situate in any diocese, but subject to any peculiar jurisdiction of the bishop of the diocese in which the same are locally situate, shall be only subject to the jurisdiction of the bishop of the diocese within which such parishes, churches, or chapelries are locally situate." After providing, by section 12, for the approval and ratification of such schemes by Order in Council, it was enacted by the 14th section that any such Order in Council, when registered and gazetted, should in all respects and as to all things therein contained have the same force as if every part thereof were included in the Act itself, any law, statute, canon, letters patent, grant, usage, or custom to the contrary notwithstanding. In pursuance of these provisions a scheme relating to the diocese of London was proposed by the Commissioners and ratified by the Queen in Council on August 8, 1845, and subsequently duly gazetted. This Order provided that all parishes and places locally situate within the limits of the several dioceses of Canterbury, London, and certain other dioceses, and all churches and chapels, and the whole clergy and others locally situate within the limits of such parishes and places respectively, should, notwithstanding any peculiar jurisdiction or exemption from jurisdiction which any of such parishes, &c., might then possess, or be subject to, or claim to be possessed of or subject to, should be respectively under and subject to the jurisdiction and authority of the bishops of the said several dioceses, and of the archdeacons of such several dioceses within the limits of which several dioceses and archdeacons they should respectively be so locally situate, and to no other ecclesiastical jurisdiction whatsoever, except the cathedral churches of and within the said several dioceses and the royal residences, and the churches or chapels founded therein or annexed thereto, including the Collegiate Church of St. Peter, Westminster, which should respectively be subject to the jurisdiction and visitation, if any, to which they were then by law respectively subject, and to none other; and with the like exceptions all and each of such parishes, &c., so possessing or being subject to, or claiming to possess or be subject to, any such peculiar jurisdiction or exemption from jurisdiction should severally and respectively be included in and form part of the dioceses and archdeacons respectively within the limits of which they should respectively be so locally situate. In 1840 a statute, 3 and 4 Vic., cap. 113, was passed relating, among other things, to the parishes of St. Margaret and St. John, Westminster. By the 20th section of that Act the rectories of these parishes were annexed to two canonries of Westminster, and it was provided that those parishes should become and be part of the province of Canterbury, of the diocese of London, and of the archdeaconry of Middlesex, and that the said parishes and the rectors and other ministers and officers thereof should in ecclesiastical matters be subject only to the jurisdiction of the Archbishop of Canterbury, the Bishop of London, and the Archdeacon of Middlesex respectively, in the same manner as other parishes in the said province, diocese, and archdeaconry were respectively subject thereto, and be exempted and relieved from all other ecclesiastical jurisdiction whatsoever. The effect of these enactments and order in Council was to abolish the peculiar which the Dean and Chapter of Westminster had in the parishes of St. Margaret and St. John, and consequently in the palace at Westminster, proved, as already mentioned, to be locally situate within one or other of them. It was, however, contended that the Crown, not being specially named, was not bound by these statutes and order, and that the peculiar ecclesiastical jurisdiction which the Crown, as paramount head of the Church, possessed over the palace as the peculiar of the Dean and Chapter of Westminster still continues to exist. This contention could not be maintained. The language of the statutes and the order was precise. Not only was the then existing peculiar jurisdiction taken away, but the jurisdiction of the Archbishop of Canterbury was established locally in the places mentioned. Beyond doubt the Crown was bound by the affirmative and negative provisions. The very special case of the Deanery of St. Buryan, in Cornwall, and the statute 13 and 14 Vic. cap. 76, were referred to in order to show that the Crown was not bound. But they could not countervail the effect as stated. That case had no bearing on any question as to the force of the statute 3 and 4 Vic., cap. 113; at the utmost it could relate only to the construction and effect of the statute 6 and 7 Will. IV., cap. 77, and the Order in Council, a similar order having been made on February 11, 1848, in reference to the diocese of Exeter before the statute 13 and 14 Vic. was passed. The deanery was a donative of the Duke of Cornwall, as well as a royal peculiar,

and the statute 13 and 14 Vic., cap. 76, not merely abolished the peculiar, but the deanery itself. Possibly the Order in Council of February 11, 1848, was overlooked when this statute was passed. Other royal peculiars were abolished by similar Orders in Council made in pursuance of the statute 6 and 7 Will. IV., cap. 77, and were not, so far as could be ascertained, dealt with by subsequent Acts of Parliament. Gillingham and Bridgnorth might be mentioned as instances, and a further search would probably discover others.

Then as to the second ground, as to the supposed exemption by reason of the palace at Westminster being a royal palace. The distinction between a royal palace simply and a royal palace which was also a royal residence, was now well settled by a series of authorities. The distinction was as early as the time of Lord Coke, who, in commenting on Nyerford's case, said that "this royal privilege is not only appropriated to the palace of Westminster, but to all the King's palaces where his royal presence resides, and this privilege is to be exempted from all ecclesiastical jurisdiction '*regiæ dignitatis et coronæ suæ ratione*'" (3 Inst., 141). Lord Ellenborough, referring evidently to this passage, stated that he had the authority of Lord Coke for saying that by the common law no process ought to be executed within any palace where the King's royal person resided (see 1 Campbell, 475). The distinction was obviously known to the framers of the Order in Council of August 8, 1845, where the exception is not of the royal palaces, but of the royal residences. The later authorities further showed that the exemption did not belong to the place except only so far as it was connected with the person of the Sovereign, and that in order to give the exemption the Sovereign need not be personally residing or actually residing in the place; virtual residence is sufficient. The authorities were guides to show what was the proper inference to be drawn from the facts. In the Hampton Court case the facts were that the chief officials and the chaplain, together with the housekeeper and the gardener, were all appointed by the Crown and paid out of the Civil List; that a pew was always kept in the chapel ready for the royal use; that there were certain apartments, then known as State apartments, in which pictures belonging to the Crown were exhibited to the free inspection of the public; that a guard of honour was always posted there; that the inmates to whom the Sovereign had granted the use of apartments then held such apartments at the pleasure of the Crown; and that the grapes grown in the vinery were kept for the service of her Majesty's table. The Queen herself had never resided there. The circumstances were such as to give rise to a remarkable difference of opinion among the learned judges before whom the case came, but the House of Lords decided that Hampton Court, although a royal palace, was not a royal residence. Lord Chelmsford, in advising the House, stated that the question was—Is the palace so occupied by others as that her Majesty could not immediately return and reside in her own person if she were pleased to do so? Now, what were the facts in relation to the existing edifice at Westminster? For it was with that building alone that he was now concerned. The old palace, which had in the course of time been considerably enlarged, was, as was well known, burnt down in 1834, and the present palace was erected on a much more extended site, the extension being principally towards the south. It had been a matter of contest before the Court whether committee-room E did or did not stand on part of the site of the old palace. No satisfactory proof has been adduced on either side. The burden of proof would rest on those who claimed the exemption, but his lordship did not think that this question of fact was material. The present palace had never, in fact, been used as a royal residence. In the statute 30 and 31 Victoria, cap. 40, passed to enable the Commissioners of Works to acquire lands for the purposes of "the new palace at Westminster" it was styled in the preamble "her Majesty's new palace at Westminster, commonly called the Houses of Parliament" and in the body of the Act it was styled "the new palace at Westminster." The short title of the Act was "The Houses of Parliament Act, 1867." The palace had not been constructed or fitted up for the residence of the Sovereign. It was under the control, not of the Lord Chamberlain of the Household, but of the hereditary officer known as the Lord Great Chamberlain, who had (as appeared by the certificate or letter of the Deputy Lord Great Chamberlain put in evidence on the part of Mr. De La Bere) the general control and keeping in order of the House of Lords and its committee-rooms, except during the session of Parliament, during which the key of the House of Lords was entrusted by the Lord Great Chamberlain to Black Rod. This certificate also stated as follows:—"What apartments shall be kept for her Majesty's use on the occasion of her coming to Parliament is a matter as to which her Majesty's personal wishes would be ascertained whenever the occasion might arise, and would be instantly obeyed without any question of right or authority in the matter, so that nothing that might be done in reference to this could affect any question of legal rights." It also stated that there were no records of her Majesty having assigned portions of the palace, when the new palace was built, to the House of Lords and the House of Commons respectively, but that possession of the different parts of the new Houses was given, as they were ready and complete for occu-



pation, under the authority of the then Lord Great Chamberlain. In fact, the two distinct parts of the building known as the House of Lords and the House of Commons, with their respective libraries and committee-rooms and other conveniences, had, ever since the completion of the edifices, been devoted solely to the use of the Lords and Commons respectively. It was true that her Majesty's throne was in the House of Lords, and that the Queen summoned her Parliament to meet her at Westminster, and attended there in the House of Lords whenever it pleased her so to do for the purpose of opening or proroguing Parliament. But in his lordship's opinion the existence there of the throne, and the circumstance of her Majesty attending the House of Lords occasionally on great occasions of state, were not sufficient, when taken in connection with the facts of the actual occupation of the building by the Lords and Commons, to make the palace at Westminster a royal residence.

An argument addressed to the court on behalf of Mr. De La Bere in this part of the case must not be wholly passed by. It was an argument founded on the statute 28 Henry VIII., c. 12, for declaring the limits of the King's Palace of Westminster. The ancient palace, which was built or enlarged by Edward the Confessor, and had been used as a royal residence by many sovereigns after the Conquest, had in Henry VIII.'s time fallen into ruin, and that monarch after his acquisition of Cardinal Wolsey's house at Westminster, called York Place, and now represented by Whitehall, purchased (to use the language of "Holinshed's Chronicles," 775) "all the meadows about St. James, and there made a fair mansion and a park for his greater commodity and pleasure; and because he had a great affection to the said house at Westminster he bestowed great cost in going forward with the building thereof, and changed the name so that it was after called the King's Palace of Westminster." The statute of 28 Henry VIII., c. 12, passed a few years afterwards, enacted that all this additional property, and also the soil of the ancient palace, should be thenceforth the King's whole Palace at Westminster, and should be taken and called the King's Palace at Westminster for ever." The statute extended the limits of this palace up to Charing Cross, and annexed to the palace within these extended limits all the privileges of the ancient palace, which was thenceforth to be deemed only as a member of the new palace. Upon this statute it was argued that the privileges of a royal palace were affixed to Westminster Palace in perpetuity, but besides proving too much (for counsel for Mr. De La Bere, who certainly were not deficient in boldness, declined to assert that the privileges now extended to the entire district up to Charing Cross), this argument merely came back to the question, What were the privileges of a royal palace?—a question already disposed of. The same observation applied to the argument founded on the jurisdiction of the Queen's Ancient Coroner, which existed, or was claimed to exist, in all the royal palaces without distinction. There was another equally fatal objection to the argument of Mr. De La Bere in regard to the palace. The privilege of exemption not being appropriated to the locality itself, being a personal privilege of the Sovereign, communicated to the place only during the actual or virtual residence of the Sovereign there, could plainly be waived or dispensed with. In "Nyerford's case" and "Bogo de Clare's case," the proceedings were at the suit of the Crown and the officers of the Crown, whose offices were disturbed, as well as of other parties aggrieved. In "Sparks v. Sparks" (7 Taunton, 311) it was held that an arrest within the verge of the palace was no ground for discharging the defendant out of custody, Park, J., saying that if those who had jurisdiction were injured, it was for them to complain, and Burroughs, J., stating that the point had been decided twenty years ago upon solemn argument. In "The King v. Hobbs" (3 Term Reports, 735) the defendant was indicted for assaulting and imprisoning an officer of the Palace Court within the King's Palace at Westminster, his Majesty being actually resident and abiding in his royal person in the palace. A special verdict sets forth the statute 28 Henry VIII., cap. 12 (already referred to), and letters patent of Charles II., constituting the palace court (which had since been abolished by statute). Lord Kenyon, in giving judgment, stated that supposing there were certain privileges annexed by the common law to the King's palace prior to the reign of Charles II., yet undoubtedly the king had the right to dispense with any of those privileges, and he held that the King had, by the charter of Charles II., dispensed with some of them as respected the palace at Westminster. So in the judgment of Willes, J., Keating, J., and Montagu Smith, J. (reported L. R., 3 Ex. 298), in the "Hampton Court case" those learned judges stated that it was not likely that the existence of the privileges claimed would ever lead to injustice or inconvenience, as an application to the Lord Steward, or other proper officer of her Majesty's household, would always obtain a remedy for the creditor either by a permission to execute process within the palace, or by insisting upon the prompt discharge of the debt as a condition of the enjoyment of her Majesty's bounty. Lord Hatherley in his speech advising the House of Lords, in the same case (4 H. L., 369), adopts this passage. Lastly, it was admitted that Lord Penzance sat in committee-room E of the House of Lords, with the permission of the Lord Great Chamberlain, the proper officer of the Crown to grant such permission.

For these reasons he must hold that the second ground of objection also failed. The result was that the order *nisi* must be discharged, and with costs.

It is understood that the case will be brought before the House of Lords in order to determine in what diocese the Committee-room of the House of Lords is situated.

### THE WORCESTERSHIRE EXHIBITION.

THE Exhibition which was opened at Worcester on Tuesday by Earl Beauchamp is remarkable as illustrating local industries as well as the treasures possessed within the boundaries of the county. The buildings formerly used as the West Midland Waggon Works have been adapted for the Exhibition under the direction of Messrs. Henry Rowe & Son at a cost of about 2,000*l*. The superficial area is about 54,000 feet, all of which is occupied. In the nave the place of honour is given to the Worcester Royal Porcelain Company (Limited), a splendid selection of whose choicest products are arranged upon the shelves of two large curving stalls. In the centre of the floor, and surrounded by a tastefully-placed collection of plants, stands Mr. Brock's bronze group, *A Moment of Peril*, lent by the Royal Academy, by whom it was purchased for the nation under the terms of the Chantrey bequest. A fountain in Doulton ware is placed just in front of the orchestra, and Messrs. Doulton & Co. are also exhibitors of a case of smaller works in faience impasto, pâte-sur-pâte, and Doulton ware. Among the local industries represented are the tiles made by Webb's Worcester Tile Company, and the cast iron and hardware of Messrs. Baldwin, Son & Co.

The Fine Arts Section occupies five galleries, and includes eight large cases lent from the South Kensington Museum. Messrs. Elkington have sent four cases of art work. Earl Beauchamp, the president of the Exhibition, contributes a large case of Sévres china, including examples of turquoise blue ware, with subjects in the medallions painted in many instances by noted artists. The rear of the case is occupied by about forty specimens of Limoges and other enamels. Next come three cases lent by the Earl of Dudley; two of them contain treasures of old Worcester porcelain with scale blue ground and rich gildings and paintings, while in the third is the *déjeuner* service of jewelled porcelain presented to the Countess of Dudley by the city of Worcester on her marriage in 1865; also a similar service in royal blue, with subjects in gold. A very large collection of old Worcester ware is contributed by Mr. Frederick Bodenham, of Hereford, in which a special feature is made of the early blue-and-white porcelain. The representation of this ware is rendered additionally complete by loans from Lady Mary Ponsonby, Mr. T. J. Callowhill, and Captain Castle. Carvings in ivory and hard woods, antique silversmiths' work, cashmere metal goods, and other articles of virtu are exhibited in considerable variety.

The display of pictures by ancient and modern artists affords material for prolonged study. Among the old masters are examples of Rubens, Rembrandt, Vandyke, Holbein, Quintin Matsys, and Sir Joshua Reynolds; while of deceased artists of more modern times there are works by Turner, Müller, Etty, and Landseer. Müller is represented by an exquisite landscape, *Tivoli*, lent by Mr. J. Brinton, M.P.; and Turner by a sea-piece, lent by Mr. J. Corbett, M.P. Among the works by painters of the modern school is Holman Hunt's *Shadow of the Cross*, lent by Messrs. Agnew & Sons; and Laminais's *Les Vierges de Jumièges*, lent by Messrs. Wallis & Son. Associated with the fine-art department is a historical section, in which are comprised antiquities of various kinds, artistic and literary, and a long series of portraits of bygone members of the Worcestershire aristocracy and county celebrities, many of the portraits being from the hands of Sir Joshua Reynolds, Sir Peter Lely, Benjamin West, Kneller, and other famous painters. The Art Needlework Department has been arranged by a committee of ladies, acting under the presidency of Lady Alwyne Compton. It is principally occupied by antique productions, among which the largest display is made by a series of church vestments from the thirteenth to the eighteenth century, many of the specimens being of extraordinary beauty of design and execution. A picture, in crewels, of *Napoleon as First Consul*, by Miss Linwood, is curious. A number of samples of antique needlework are interesting, not only for their quality, but their association: for instance, there are shown the christening mantle of King James II.; an embroidered cushion used on the same occasion; a chemise used by Marie Antoinette; some articles of baby linen, said to have been worked by Princess Elizabeth for Queen Mary; lace taken from the cravat of William III.; and christening robes of several important personages. Modern work is but sparingly represented, on account of the limited space, and the samples have for that reason been the more carefully selected. Some of the choicest are embroideries from the Royal School of Art; while the work of the students in the Leek School of Embroidery and the Sloane Street School of Needlework also find places.

At the banquet which was given after the opening Earl Beauchamp said:—

It was, he believed, a matter that might be called unique, that they were able to bring together in one exhibition such a varied collection of works of art, almost all belonging to that county, and such a variety of industrial products. It was a re-



markable circumstance that the county of Worcester should contain within its borders so many products of Nature and of Art. And rich as had been the gifts with which Nature had endowed them, those gifts would be of little account if they were not converted to the use of man by the industry of their manufacturers and their artisans. It was not enough that they should enjoy those gifts of Nature, unless they should be turned to the best account; and that was a matter which for many years past had occupied some of the most sagacious minds of this country, as to how the artisans might receive technical education which would enable them to throw into their work more energy and truer principles than they had done in past times. They owed it to the Prince Consort and to those who were associated with him in 1850, prior to the Exhibition of 1851, that the results which had since been attained had been brought to perfection and within their reach. That was not the occasion to give a lecture upon the importance of technical education, or of the value of art as applied to industry. They, by their Exhibition, had recognised that Industry and Art were twin sisters, and that the one ought to assist in the development of the other, and that one could not fully appreciate industry who could not understand the principles which underlie all true art; and so they might say that he could not fully appreciate art who did not understand industrial and technical details. They might, indeed, congratulate themselves upon the Exhibition, which was, he believed, a matter of considerable importance to that county; and he trusted that they would find that the appreciation of art would find a new development among them, and that their numerous artisans would benefit by the opportunity to be gained by the Exhibition. There was a time, not so very long ago, when it was the fashion to depreciate English art and English taste in every way, and their appreciation of art and of beauty was considered to be very inferior among nations on the Continent. He ventured to think that that arose from a very imperfect recollection of the history of England. It was impossible for anybody to go up and down throughout England, and to admire the buildings reared by their forefathers, without seeing that those who reared those buildings had a keen and adequate perception of the true principles of design, and of the true principles of beauty. And those results were due to English art and to English artists, and not to foreign or extraneous aid. Many of them might remember that King Edward, on the death of his Queen, erected sixteen crosses at various places where her body rested on the way to its burial, and that those sixteen crosses, with the names of the builders, had been preserved. And it appeared that of the sixteen crosses no less than fourteen were erected by English artists, and only two of them bore foreign names. That, therefore, showed that even in early days England could hold her own in competition with architects of foreign countries. They knew that not only from the circumstances to which he had just referred. The west front of Wells Cathedral was adorned with a most remarkable series of sculptures, dating from the middle of the thirteenth century, and the names of the artisans had been preserved by the Dean and Chapter; and in a very remarkable book published by the late Mr. Cockerell—himself an architect led as far as possible to the admiration of Greek and Roman designs—the writer bore most ungrudging testimony to the beauty of the work of those English artisans whose sculpture appeared on the west front of the Wells Cathedral. They also knew that in the early Middle Ages, before the Norman Conquest, England was renowned for its work. Through the Middle Ages England was renowned for her embroidery, of which they had a noble example brought together by an admirable ladies' committee, and which adorned the walls of the Exhibition. It was not necessary therefore to enlarge upon the excellence of English art in that particular. As regarded painting, they knew that the walls of English churches used to glow with most beautiful colours and most beautiful designs. There was in the neighbouring county of Gloucester, not far from that city, a small church so decorated, the painting of which dated from the beginning or middle of the twelfth century, if not earlier. Then there were illuminated manuscripts which had come down to them; but he would not refer to decorative work of that kind. It would be enough to point to the paintings which they possessed, and to refer briefly to a remarkable school which England enjoyed: he meant the school of miniature painters. From Queen Elizabeth downwards we had had a most remarkable school of miniature painters, whose works existed in their pristine beauty; and some of them might perhaps have seen no longer ago than last Saturday that a specimen of miniature work of Hilliard's sold for no less a sum than 2,700 guineas. That showed that the work of English artists had survived from that time to the present, and was still appreciated. Coming down to the last century, he might mention the names of Gainsborough, Romney, and Sir Joshua Reynolds. When those great artists passed away they vindicated the name of England as a country not devoid of art.

**Messrs. Taylor & Co.,** of Loughborough, have just cast the big bell for the Manchester Town Hall. About 8 tons of metal have been used, independently of the hammer and fittings. The height is 6 feet, the diameter at the mouth 7 feet 7 inches, and the thickness of metal at the sounding bow is just under 7 inches.

## SMOKE ABATEMENT.

THE distribution of prizes and awards in connection with the recent Smoke Abatement Exhibition at South Kensington took place at Grosvenor House, under the presidency of the Duke of Westminster, on Friday afternoon in last week. His Grace, in opening the proceedings, said that the exhibition, although, perhaps, not so interesting as flower or cattle shows, had been very satisfactory. It had been visited by no fewer than 116,000 persons. The question of an open grate was an unsettled one, but he regarded the desideratum to be a grate which should be sufficiently open to show a bright fire, which should be smokeless, and which should secure economy of fuel. That result had, however, not yet been completely attained, but when it was realised the question would arise as to whether it should not be made compulsory. Mr. Ernest Hart, as chairman of the Smoke Abatement Exhibition Committee, said that the exhibition was an interesting one, and that so numerous and various were the kinds of apparatus as to necessitate about 1,000 applications of the tests. The experiments were conducted by Professor Chandler Roberts and Professor Frankland as to the economy of fuel, &c. The exhibition had shown that smokeless kitcheners were possible and could be fitted to any house. The consumption of gaseous fuel afforded the most promising solution of the problem how to relieve cities from the nuisance of smoke. The Committee had decided, if they could find sufficient support from the public, to form an institute, among whose objects would be to promote the better utilisation of coal and coal products—to determine practically and scientifically the means actually available for heating houses as at present constructed without producing smoke, by enabling the Committee to examine the subject generally and report for public information. After Mr. Henry Phillips had given a report of the success of the Manchester Smoke Abatement Exhibition, Lady Grosvenor presented the awards and prizes, the special Dr. Siemens prize of 100 guineas for the best utilisation of coal being divided and awarded to the Dowson Economic Gas Company (Limited) and the Falkirk Iron Company, while the Ladies' Prize of 50 guineas for the best smoke-preventing coal-burning kitchener was divided between Mr. J. F. Constantine and the Eagle Range Company, and presented by Miss Shaw-Lefevre. Professor Abel then moved the following resolution:—"That it is desirable that the work thus far carried on by the Smoke Abatement Committee be continued, and for that purpose a Smoke Abatement Institute be formed." Mr. Norman Lockyer seconded the motion, and said that there were numerous points of view in which the country might derive great benefits from the removal of the smoke, and among them scientific benefits. It was part of his official work to observe the sun, but owing to the smoky atmosphere which we had almost always over London, he could only perform his inspection once a week, and often once a month only. He believed also that a sunless place was a joyless place. The motion was carried, and a vote of thanks was passed to the Duke of Westminster for presiding.

## FLAMELESS COMBUSTION.

A NEW theory of combustion was practically illustrated by Mr. Thomas Fletcher, of Warrington, at a soirée of the Society of Chemical Industry at Owens College, the results being so totally unexpected that many present would, and in fact did, go away with the impression that some deception was being practised. Mr. Jacob Reese, the inventor of the Reese fusing disc, has stated his belief that if it were possible to produce combustion without flame, the temperature and duty obtained from any fuel would be enormously increased. It has remained for Mr. Fletcher to not only prove the possibility of flameless combustion in more than one form, but also to demonstrate practically the enormously high temperatures which can be obtained by this means. Taking a ball of iron wire about three pounds in weight, Mr. Fletcher placed it on a slab of fire-clay, and directing a blowpipe flame on it for a few seconds he suddenly blew the flame out. The temperature increased so rapidly that in a few seconds the wrought iron fused and ran into drops, and this temperature was steadily maintained. The room was darkened, but the closest examination did not show a trace of flame, although the fact that the gas was burning was proved by repeatedly relighting and extinguishing it. The same experiment was repeated in another form by directing the flameless heat into a small fire-clay chamber, in which a refractory clay crucible, made specially for nickel melting, was partially fused and worked into a ball like soft putty, the sides of the fire-clay chamber being at the same time fused. The heat was so tremendous that the blowpipe laboratory, which was given up to Mr. Fletcher for the evening, was much too hot to be agreeable, in spite of open windows and ventilators. How far this discovery can be utilised remains to be seen, but it would appear that the presence of flame, usually considered to be a sign of combustion, is really an indication of imperfect results, and the best duty is to be obtained only when flame is totally absent. It is certain that such temperatures as those obtained by Mr. Fletcher without flame have never previously been obtained with the fuel used, which was nothing more than a small gas supply for a quarter-inch pipe, assisted by an air blast.



## NOTES AND COMMENTS.

THE campaign of the Archæological Societies will shortly begin, and a little is already known of their movements. The first meeting of the Royal Archæological Institute at Carlisle will be held on August 1, and in the course of the day the Mayor will describe whatever is considered noteworthy in the town. Afterwards the Castle will be inspected, under the guidance of Mr. CLARK. There is much around Carlisle to afford materials for an interesting meeting. The rival Association will meet at Plymouth on August 21, and as the Duke of SOMERSET is to deliver the inaugural address, something original may be anticipated. In the programme are included visits to Buckland Abbey, Totnes, Dartmouth, Lydford, Tavistock, Torre, Plympton, and Liskeard, thus covering a wide area. The Kent Archæological Society will meet on August 2 at Maidstone, and on the next day there will be excursions to Leeds, Battle Hall, and Lenham.

THE Exhibition of Decorative Art will open in Paris on August 1. The Palais de l'Industrie is already transformed. On the first floor glass cabinets have replaced the pictures lately hanging there, and the collections for which they are intended are rapidly being classed, catalogued, and placed in position; while in the grand hall the rooms and pavilions destined for the exhibition of modern work in wood, stuffs, and paper are rapidly being erected. Altogether, the Exhibition is being organised on a grand scale, and gives promise of a success that will repay the labours of the committee of the Union Centrale des Arts-Décoratifs.

THE Société des Amis des Arts of the Department of Seine-et-Oise last Sunday opened its twenty-ninth annual Exhibition of Fine Arts at the Palais de Versailles. The number of exhibitors is 428, who send 747 works—pictures, sculptures, engravings, etchings, enamels, &c. The Exhibition is therefore of considerable importance, all the more so that some of the best-known names in French art are among the exhibitors. It is allowable, however, to make the remark that, as the very *raison d'être* of these Exhibitions is to develop local art, no works that have been previously shown in public should be admitted; whereas in the Versailles galleries may now be seen many paintings and groups that were on view at the Paris Salon last month. It is to be hoped that the committee will next year give more encouragement to local ability.

THE Glasgow architects, as we learn, are expressing great dissatisfaction with what they regard as the illiberal conduct of the Town Council in refusing the exhibition of the designs; and the public and the press of the city appear to take the same view of the case. Unless we are mistaken, the profession generally throughout the country will be found to support the request, if only on the simple ground that secrecy is always suspicious. The proper course for the Town Council to take is not only to exhibit the ten selected designs, but to co-operate with the Institute to secure an exhibition of the designs in the original competition. Up to the present moment the contributors to the enterprise have *not even received thanks* for their costly contributions—costly, we may certainly say, to the tune of some 10,000*l.* of hard cash at the least. We may be permitted to hope that Mr. BARRY is in no way responsible for either the refusal of the exhibition or the neglect of the compliment of thanks. He cannot but know well that publicity is the best safeguard of honesty, and that anything like reserve in this respect is the worst possible policy. Not only is all liberality of feeling absolutely due to the competitors as a moral right, but it is none the less due to the reputation of the citizens of Glasgow and to the credit of the adjudication.

THE following promotions and nominations of artists in the Legion of Honour were made on the occasion of the 14th July Fête de la République Française:—*To be Commander*: M. BONNAT, painter, member of the Institute, Officer of the Order since 1874. *To be Officers*: M. HENZEY, Professor of the National School of Fine Arts, conservator of the Louvre, member of the Institute, Knight of the Order since 1867; M. VAUDREMER, architect, member of the Institute, Knight since 1867; M. CAIN, sculptor, Knight since 1869. *To be Knights*: M. CAZIN, painter, 1st medal 1880; M. GERVEX, painter, 2nd medal 1874, *rappel* 1876; M. PILLE, painter, 3rd medal 1860, 2nd medal 1872; M. IDRAC, sculptor, Prix

de Rome 1873, 3rd medal 1877, 1st medal 1879; M. LAUSON, sculptor, 3rd medal 1875, Prix de Rome 1876, 2nd medal 1879, 1st medal 1880; M. DUTHOIT, architect of national buildings, medal in 1863 and 1864, 1st medal 1878 Exhibition; M. WALTNER, engraver, Prix de Rome 1868, 2nd medal 1870, 3rd medal 1874, 1st medal 1880; M. LAGUIL-LERMIE, engraver, Prix de Rome 1866, 2nd medal 1877.

M. DESIRÉ CHARNAY, the intrepid explorer of Central America, has just returned from his latest Mexican expedition. M. CHARNAY has discovered in the country of the Lacandous (the Mayas) the ruins of an old town, to which he has given the name of the "Phantom City." He likewise brings back with him 150 square metres of fresh architectural casts, which were taken during his journeys through various Aztec cities. They will be added to the collection of similar curiosities with which he has already enriched the Trocadéro Museum.

THE Rue Andrieux, in the Eighth Arrondissement of Paris—which takes its name, not from the ex-Prefect of Police, as might be supposed, but from the poet, JEAN STANISLAS ANDRIEUX—is not much more than 120 yards in length. It is, however, remarkable for the number of houses it contains which belong to architects. The whole of one side is taken up by the Collège Chaptal, while out of the fourteen buildings on the other side no less than nine are the property of and are inhabited by members of the profession.

THE new Hotel de Ville which has been inaugurated in Paris may be said to be a copy of the building which was destroyed by the Communists in May 1871. There is a difference in the statues, for those which appear are memorials of eminent natives of Paris. The cost of them was 1,213,660 francs. The building will cost over twenty-five million francs. It contains 368 rooms, and covers an area of ten thousand superficial yards. The architects are MM. BALLU and DEPERTHES, whose designs were selected from amongst those of sixty competitors.

THE condition of the books which came from Hamilton Palace for sale in London was a surprise to librarians. It is rare to find books in England so little affected by the atmosphere, and by the means adopted for artificial lighting and heating of rooms. The explanation given is that the rooms in which the books were kept were lighted from above, and that double sashes were used. The bookcases were guarded by wire doors, which allowed of ventilation without sacrifice of safety.

AN administrative commission, appointed to consider the question, has just reported in favour of the foundation in Paris of a School of Physics and Industrial Chemistry, and the project will now be submitted to the Municipal Council for approval. It is proposed to establish the school in the old buildings of the Collège Rollin, in the Rue Lhomond; No. 38 of the same street is to be taken in, and on its site will be erected a new building for the laboratories—five in number—for general chemistry; qualitative and quantitative analyses; physics, including electricity, heat, optics, &c.; and technological subjects. The school will receive ninety pupils, of not less than fourteen and not more than eighteen years of age at entry, who will be required to pass a preliminary and competitive examination in the elements of mathematics, physics, and chemistry. The course is to be three years.

DR. PERCY raised the complaint, when he undertook the sanitation of the Houses of Parliament, that there was not a plan available on which drains and flues were marked. If a plan could be discovered showing the position of the existing building as compared with the old buildings, it might enable the Courts to come to a decision in the Prestbury Ritual Case; for it is understood that there will be further litigation before it can be determined whether Room E is in the archdiocese of Canterbury or not. Mr. Justice CHITTY said the point was contested whether the committee-room did or did not stand on part of the site of the old palace, but no satisfactory proof could be adduced on either side. The other points in the case belong to the historian and the archæologist rather than to the surveyor, and they are found to be no less obscure. The judgment in this remarkable case by Mr. Justice CHITTY was marked by a careful examination of the evidence, but it cannot be said to be conclusive.











## ILLUSTRATIONS.

AGRICULTURE: A DECORATIVE FRIEZE.—PART IV.

## THE PROPOSED PUBLIC OFFICES.

THE following evidence was given by Mr. John Taylor, of the Office of Works, before the Select Committee of the House of Commons on the Public Offices Site Bill. The chairman was Mr. Shaw Lefevre, the First Commissioner of Works.

*Chairman:* You are the Surveyor of the Office of Works?—I am.

And by my instructions you have prepared the plan which is now before the Committee?—I have.

That plan provides accommodation for the War Office and the Admiralty, adjoining one another?—It does.

And it places the War Office next to the Horse Guards?—It does.

And it provides 59,000 square feet for the War Office, and 52,800 for the Admiralty?—That is so.

Are you aware that the War Office officials and the Admiralty have stated that that area will be sufficient for their purposes?—That is understood.

It also provides a block in Spring Gardens, coloured pink in the plan before the Committee, on which residences for the First Lord of the Admiralty, the First Naval Lord, and the Secretary could be built, if it were thought desirable that those officers should have residences there?—That was the intention.

And it would be available for other public purposes, if it should be thought undesirable that those officers should have residences there?—Yes.

The plan also provides for widening the entrance at Charing Cross by Messrs. Drummond's Bank to a width of 60 feet?—That is so.

And it would give access to the proposed Admiralty in Spring Gardens?—That was the intention in widening the entrance.

Will you state to the Committee whether there were reasons for not putting the façade fronting the Mall nearer to Carlton Terrace and the Metropolitan Board; do you consider that it is as near as it could be placed, having regard to the rights of the Metropolitan Board and of the people who live in Carlton Terrace?—The block coloured pink could certainly not be placed any nearer to the Metropolitan Board without injuring their lights.

I am dealing now, not with that, but with the main building fronting the Mall?—I think it is as close to the Metropolitan Board of Works as it ought to come; it would be a very high building.

What is the distance between that and the garden of the Metropolitan Board?—About 160 feet.

Do you consider that it would not be advisable to bring that frontage nearer to Carlton Terrace?—It would not, I think.

Then the plan provides that the frontage to Whitehall shall run from the Horse Guards to Messrs. Cox & Biddulph's Bank?—That is, as it is shown on the plan.

What is the length of that frontage?—450 feet.

That is considerably longer than the frontage of the new Home Office to Parliament Street, is it not?—Considerably longer.

The plan provides that the back of Messrs. Cox & Biddulph's bank should go along Spring Gardens?—The plan provides for the back of Messrs. Biddulph's bank being left as it is.

And then the building is at the rear of Messrs. Biddulph's bank?—Yes, at a distance of about 45 feet.

Do you consider that the courtyards, as shown in the plan, are sufficiently large for light and air, and for the conveniences of the Public Offices?—I am quite of opinion that they are large enough for light and air.

What is the area: the length and breadth of them?—The length of the two principal quadrangles is about 155 feet by 130 feet to 90 feet respectively.

Are those courtyards as large as the courtyards of the India Office and the Foreign Office?—None of them is so large as the principal quadrangle of the Foreign Office.

I meant the smaller courtyards?—The smaller quadrangles in the proposed new buildings are larger in area than they are in the Home Office and Colonial Office.

And are those found sufficient?—I have heard no complaint as to them.

*Mr. Gerard Noel:* The quadrangle that has "Buckingham Court" written upon it is much smaller than the other three; do you consider that sufficient?—That quadrangle is very much larger than the smallest quadrangle of the Colonial Office.

But there have been many complaints, have there not, of the existing courtyards, that they are not large enough, that the light is not sufficient; do you think that the one which I now allude to is quite ample and sufficient?—Yes, that courtyard is 100 feet by 60 feet.

It came out in evidence in 1877, if I remember rightly, that there was not sufficient light from the courtyards in many of the public offices; that is why I ask whether the one called Buckingham Court is sufficient?—I think this court is ample for the purposes of light and air; 100 feet by 60 feet.

*Sir Henry Selwin-Ibbetson:* What is the contemplated height of the new buildings?—The probability is that they would be 70 feet to 80 feet high.

In what way does that compare with the height of the buildings of the Home Office and Foreign Office existing at present?—About the same. I am assuming that height; but there has been no elevation prepared.

You assume, from the ground plan and the amount of space required, the height just stated?—Yes.

And you propose to bring that height up to the existing Horse Guards block, at 70 feet?—Not necessarily up to the Horse Guards. I think the block next the Horse Guards on either side would probably be dropped to a lower level.

I wish to ask you, with regard to the building coloured pink; that building, if erected as it is, would stand directly in the way of a straight thoroughfare, carrying out the Mall as it is at present, into Charing Cross?—It would stand directly in the way of that.

Have you had before you, or contemplated, the possibility, supposing such a thoroughfare is ultimately made, of being able to place a building of a similar size and character to the pink plot on a site adjoining that which is marked green; that is to say, the main Admiralty buildings?—Yes; there would be no difficulty in finding a corresponding area provided the buildings were built at an angle.

And that would place the house built for the First Lord, if it were used for that purpose, together with the buildings where the offices were situated?—Yes; the residence would then be in the main building instead of in a detached one.

And might be made to form part of the façade of the main building architecturally?—Yes.

However, there is nothing to prevent the First Lord's house being erected on that space so as not to interfere, should it be thought necessary, with a more direct line from the Mall into Charing Cross?—There would be no difficulty in obtaining the First Lord's residence on the site.

*Mr. Walter:* Might not the same object be gained by slewing round this building, as at present laid out, in this way (*pointing to the map*); placing it more in a line with Carlton House Terrace?—There is not sufficient space in the angle to admit of that.

*Mr. Brand:* Would not the house that is proposed to be erected for the First Lord, in this spot marked pink, entirely prevent the entrance to the park from Charing Cross being made in a straight line?—It would prevent a handsome entrance from being made as it stands now; the entrance would be comparatively narrow, and would not be straight.

Could not this ground be utilised that is marked with red dots at the corner of the proposed Admiralty building?—To a certain extent it could, but it would probably injure the back lights of some of the buildings now there; for instance, Messrs. Drummond's bank has lights at the back, and those lights would probably be affected by the erection of a high building parallel to that bank.

In the original plan before the committee last week, was it not proposed to take half of Messrs. Biddulph's bank?—Notice was given to take a portion of Messrs. Biddulph's bank at the back, but not a portion of the main building; it was proposed to take a portion of a much lower building, having its frontage in Spring Gardens.

As compared with the original plan then, the space has been reduced?—No, it has not been reduced in this plan at all.

*Mr. Gerald Noel:* Could you tell the Committee when Messrs. Biddulph's bank was completed?—I should think it must be about six or seven years ago.

*Mr. Rylands:* With regard to this proposed entrance, 60 feet wide, which, in the plan submitted to the Committee, crosses the corner of the building marked pink, would you be able to draw it in a straight line, 60 feet wide, the whole length of it taking off part of the building without any serious inconvenience in regard to your plan?—Yes, I think so, by shortening the pink building to a certain extent.

*Chairman:* That we propose to do?—Yes.

That building is about 10 feet longer than was originally contemplated, and by reducing it 10 feet it would make the whole road 60 feet wide, should it be thought necessary to have a road entering the Park at that width?—Yes.

Not absolutely in a straight line, but nearly so?—Very nearly. It is no longer possible to obtain a straight line there, because of Drummond's new bank; you cannot get a wide entrance perfectly straight with the Mall now, unless you take that bank down.

*Mr. Rylands:* Following up my question put just now, you would get an entrance 60 feet wide, and which would go into the Mall, without any disadvantageous appearance?—I think so.

And would you recommend that, in preference to the alternative scheme which has been suggested, of putting this red building alongside the main Admiralty building?—No, I do not think I should. I should almost prefer the main building to be erected at an angle, and to remove the pink building altogether.

Then you would prefer that the new part coloured green for the proposed Admiralty should be increased by a certain amount of building, to take the place of the small plot coloured pink?—As a matter of design, I certainly should.



*Chairman*: But it would interfere with the façade on that side, would it not?—Yes, it would to a certain extent; but I do not think it would be seriously objectionable.

But if it were intended for the residence of the First Lord, it would not be so desirable a position, would it?—You would not be able to make any particular part of the main design appear to be a residence apart from the offices. The residence would then simply have to be embodied in the main building.

*Mr. Arthur Arnold*: You are aware perhaps that Mr. Childers gave evidence to the effect that it did not appear to him desirable that there should be a residence for the First Lord?—I am not aware of that.

*Mr. Rylands*: Would you look at this plan (*pointing to it*)? The proposal you have just been answering me about is the one which would propose a line running through the corner of the plot marked pink, and so getting into the Mall with a turn; is there any objection to making the line more straight—that is to say, carrying it from here (*pointing*), just to bring it along parallel, or rather exactly opposite, to the line of the Mall; that would, of course, destroy the pink building altogether?—It would destroy it.

Would there be any objection to that?—There is no objection, except that you lose a certain amount of building space.

*Chairman*: You lose 9,000 feet, in fact?—Yes.

*Mr. Rylands*: But if you were to take the red building and attach it to the Admiralty, would you not make up for that loss of space?—To a certain extent I think we should; but the plan would not be nearly so convenient as the present arrangement of the proposed building.

I thought you said just now that you preferred the buildings provided for in the red plot being attached to the Admiralty main building?—As a design for a handsome entrance to the Mall, I do; but the plan would not be so convenient as regards the offices.

*Chairman*: Looking at the façade (*pointing*), it would not look well if this corner was not a right angle, but a different angle, so as to make the building in a line with the entrance to Charing Cross?—I prefer it as it is as a plan; but having regard to the general effect of a building erected there, if the entrance be a wide and handsome one, I should say, take up the general line of the opening into the park.

But then it would be open to this objection, would it not, that as looked at from the Mall, the building would not be a rectangular one?—That difficulty could be overcome.

*Mr. Rylands*: Just now you gave the dimensions of the proposed new court, the smaller court of the Admiralty, on the site marked "Buckingham Court"?—Yes.

Would you repeat, if you please, the area of that court?—I think I said 100 feet by 60.

Now, referring to this small court of the Colonial Office (*pointing to it*), what are the dimensions of that court?—The dimensions of that court are 70 feet by 50.

Then the area of the court in the Admiralty over the site marked "Buckingham Court" would be considerably in excess as compared with the area of the Colonial Office court?—Considerably.

Would you be kind enough to state how many square feet?—The proportion would be about as 6,000 to 3,500.

Then it is really not very far from double the space?—Very nearly double.

In making that comparison, have you made an allowance in the Colonial Office court for a considerable projection which appears there, in the form of what appears to be a bay?—I have not taken out the bay, and I took the longest side of that court; it is not square.

But then does not that make the Colonial Office court appear larger than it ought to be taken as being?—There is a deduction from that by the projection you speak of.

If you take the longest side in multiplying, with a view to find the area of the Colonial Office court, would you not make the area appear to be greater than you would do if you took the shortest side?—Yes; I have not made any deduction for the projection into that area, which is not a high structure.

But I want you to make the deduction; I want to get the actual area of the Colonial Office court.—I should have to take it in detail to find it.

If you had made the deduction for this bay in the Colonial Office court, is it not the fact that the area would have been less than the estimate of the size of the court which you have just given? Probably a little less, but I cannot say exactly, unless I take out the actual dimensions. I think the figures which I have given you are about correct, relatively—as 6,000 is to 3,500.

*Sir Henry Selwin-Ibbetson*: You are aware that the office rooms in the Colonial Office round this court are of a very great height themselves internally?—They are.

There would be no necessity requiring that the rooms in the new Admiralty or the War Office should be of that height, which has been very often stated, has it not, to be very inconvenient for office purposes?—I think there is a waste of space in the present Home Office and Colonial Office.

Consequently you could get the same accommodation round

these courts in the new buildings with very much lower rooms, and the courts would give greater light therefore in the rooms?—In the proposed new buildings it would be so.

And therefore this court in your plan, which is larger in itself than the Colonial Office court, would be still larger for purposes of light, should the rooms be brought down to the ordinary proportions of living-rooms instead of being of the height that they are in the Colonial Office and the Home Office?—Yes, if the number of floors be the same in the new building as it is in the Home Office and the Colonial Office.

You would get a proportionate increase of light in your courtyard in consequence?—Yes.

And at the same time the building so reduced in height as a general building would probably accord more with the height of the Horse Guards, which would be the centre of the whole architectural design?—I think the total height of the proposed new buildings would require to be equal to that of the Home Office at least.

Notwithstanding that you reduce the height of the individual rooms on each floor, you think that the total height must be equal to that of the Home Office?—Yes, for this reason, that some of the rooms at the top of the Home Office are very bad indeed, and ought to be higher than they are.

*Mr. Gerard Noel*: They are useless, are they, in fact?—Some of them are now being used, because I have put skylights into them at the back; but they were so arranged that they could not be properly lighted from the front.

*Sir Henry Selwin-Ibbetson*: In your opinion you could not diminish the actual height of your new building, though you might alter the proportion of the different floors?—No. There is one observation which I think I ought perhaps to make to the Committee, and that is, that although there is a block plan shown upon the site, I have not considered myself by any means committed to that actual appropriation of the land; it is a mere plan for the purpose of showing how much building area can be obtained approximately upon the site.

*Chairman*: It by no means commits the department to that special plan?—Certainly not.

But when we come to consult with the architect, it may be that some better disposition of the site may be discovered?—Yes.

All that that plan proposes to show is how that land may be utilised, and how out of it a certain building area may be obtained?—Exactly so.

The Committee-room was cleared. After a short time the parties were again called in. The Chairman stated that the Committee were of opinion that the preamble of the Bill had been proved.

## BUILDERS' BRASSWORK.

ALTHOUGH most people have some notion of the use which is made of brasswork in the building and furniture trades, it is only from such evidence as is furnished by the colossal catalogue issued by Messrs. Cartland & Sons, of Birmingham, and 40 Holborn Viaduct, E.C., that the extent and importance of this class of work can be realised. The volume, we may say, contains about 600 pages of plates, which are crowded with engravings of the articles manufactured by the firm in Birmingham. Messrs. Cartland & Sons produce many patent specialties which are well known, including Andrews', Peacock's, and Pugh's patent lock furniture, Beanland's patent quadrants, Thorpe's ventilating sash-fasteners, Leach & Holland's window ventilator and fastener, Hatton's blind furniture, Scott's sash wedge, the security casement stay, and helical climax, reliable, and Smith's door springs. But, in addition, they manufacture every kind of article in brass which a builder or cabinet-maker requires. An inventory of the different classes of goods would occupy at least a page. They supply, among other things, screws large and small, fancy nails for mantels and furniture, hooks, rings, castors, plates, escutcheons, knobs, plain and elaborate stair-rods, curtain-poles, wardrobe hooks, brackets, picture-rods, cornices, &c. Shop-window fittings form a section by themselves. There are many kinds of sconces and banner-arms. For India there are special articles for punkahs and windows, and the brasswork for ships' cabins occupies several pages. The hinges range from tiny butts to swings for the heaviest kind of doors in banks and public offices. Door plates, knobs, knockers, and handles are illustrated by hundreds of examples suitable for all styles of buildings, including Queen Anne, Renaissance, Gothic, &c. There is no firm in this country which has given so much attention as Messrs. Cartland to window fastenings, and in the catalogue the varieties need fifty pages of plates to be exemplified, many of them being ingenious pieces of mechanism. Bells, cranks, levers, and pulls also occupy a large part of the catalogue. When the vast number of the articles is remembered and the differences of taste which require to be considered by a manufacturing house, it is astonishing how little is to be found among Messrs. Cartland's productions to which the most fastidious could object. Excellent designs are to be found on every page, and it is needless to say that for quality the goods of the firm are universally esteemed.



## ST. PAUL, MINNESOTA.

FEW American cities during the past decade have made (says a writer in the *Times*) more solid progress than St. Paul and Minneapolis, the twin capitals of Minnesota, on the beautiful banks of the noble Mississippi, situate eight miles apart, but growing nearer to each other year by year. Between the two cities, which each muster their 60,000 people, there is mutually beneficial rivalry. Minneapolis boasts of her ceaseless water-power, her great milling and lumber interests, her wide sweep of well laid-out level avenues and streets. St. Paul prides herself on her picturesque undulating site, on her bluffs, commanding magnificent views of hill, wood, and river, of her terraces and ravines. She arrogates precedence not only as the State capital, but as a great commercial centre, building up a large and varied wholesale business enterprisingly pushed hundreds of miles north and west. Such development is more striking when it is remembered that in 1834, when General H. H. Sibley, one of the oldest and most esteemed citizens, first visited the Mississippi, not a white man or a house was to be seen where St. Paul and Minneapolis now stand. The beautiful bluffs, occupied by sumptuous villas, were the hunting and fighting grounds of the Sioux and Chippeway Indians, whose bones, with those of the other inhabitants, the buffalo and the elk, are often found in excavating for streets or buildings.

Town improvements are actively prosecuted in St. Paul, and more carefully and honestly looked after than by some municipalities. Water and sewage have been successfully arranged for; gas is still in the hands of a private corporation. Attention is shortly promised to the execrable muddy streets and roads, which might be readily made and kept in good repair with the admirable stone abundantly found in the cliffs and elsewhere in the neighbourhood. Convenient tram-cars run in many of the thoroughfares. New public offices, a commodious post-office, and a large, handsome passenger dépôt, common to all the railroads, have just been finished. The railroads are also building blocks of offices, and several are putting up engine and freight-car repairing and manufacturing shops, which, when in operation, will give employment to upwards of 1,000 men. To assist these projects the Municipality has spiritedly given the companies tracts of land for their sites; the St. Paul and Sioux city, for example, had a grant of 40 acres, worth upwards of 100*l.* an acre, presented gratuitously. Extending business has stimulated building operations. Upwards of 1,000 buildings of various sorts are stated to have been put up this summer; masons were in such demand that their wages advanced to 5 *dols.* per day; next spring is expected to bring still more work. Building stone is abundant and varied; a beautiful limestone is quarried in and around the town; the Ohio limestone is much used; a pleasant red-grey magnesian limestone is brought 80 miles west from Kasota; beautiful, well-pressed, small red bricks are sent from St. Louis, costing, however, 32 *dols.* per thousand; soft, rudely-made, home-made bricks of poor quality, but charged 10 *dols.* per 1,000, are used for inside work. Lime and cement—some of the latter all the way from the Medway—are dear. Recently built and in course of construction are numerous stores and warehouses of stone and brick, usually with iron columns supporting the floors, often ornamented with galvanised iron or zinc cornices; the timbers for floor-joists in some instances consist of 25 feet 16 inch red pine plank, 3 inches thick, set edgewise, 12 to 13 inches apart; the roofs are generally flat, covered with iron plating; lighter buildings, also flat-roofed, are covered with tin plate, over which a coat of grouting is generally run. Other of the cheaper houses have the rough boarded roofs cheaply covered with four or five alternated coats of stout cartridge paper, between which are layers of tar, all lopped out with a thin coating of asphalt and shingle. For roofs with the pitch usually seen at home, the common roofing materials are shingles nailed on to rough boards, with an intervening coating of mortar, which lessens the risk of fire. The shingles six months after being put in are sometimes washed over with some tar solution which helps to preserve them; for the better class of more permanent buildings slates, costing fully double the price of shingles, are coming into more common use. Many, especially of the larger stores, are as substantial, thoroughly finished, and artistic in design as any in London or Liverpool. A good type of this street architecture is a warehouse for a wholesale firm being put up by Mr. E. F. Drake, built of stone and brick, ornamented with marble pillars, 278 feet by 86 feet, with six storeys and a basement, costing 200,000 *dols.*, and leased for 16 years at 8 per cent. on the outlay, the lessees besides paying all taxes and insurance.

Building sites in the neighbourhood of the railway dépôts sell almost at London prices, but every description of land and house property in the city has doubled in value in five years, and appears destined to do so again within the next five years. Prosperous merchants, tradesmen, and their employés must be housed. Villa sites, with commanding views, amid sheltering timber, on Summit or Dayton avenues, are as high as at Twickenham or Hampstead. Blocks, measuring 50 feet by 150 feet, realise 2,000 *dols.*, or one-fifth to one-fourth of the cost of a suitable handsome house placed upon them. Most of these villas have basements of stone or brick, are substantially and artistically carried up with timber, and kept nicely painted for preservation and effect in this bright

climate, dimmed or grimed only slowly by cloud or smoke. Here, as in some other American cities, much taste and variety are exhibited in the designs and finish of these timber villas. Of artisans' dwellings there is such dearth that many large firms have difficulty in keeping good operatives, and are desirous to guarantee for a series of years 10 per cent., and even more, to builders who will run up decent houses for their people. Dwellings even of this class, notwithstanding the high value of the sites, are generally detached or semi-detached; each man prefers to have his own plot, although he seldom makes the most of it or attempts to beautify it with shrubs or flowers. Artisans' and labourers' houses are almost invariably of timber, and cost, with six rooms, 600 *dols.* to 800 *dols.*, or about half the price of the more substantial corresponding English houses. Constructed of brick, they would at present, at St. Paul, be 33 per cent. higher. Timber cottages last in good repair for twenty years, when it is presumed that the sites, doubled in value, will be required for other purposes and the buildings may be profitably removed. Gardens are seldom attached even to suburban cottages, but are becoming more appreciated, especially by artisans.

## THE STRENGTH OF TIMBER.

SOME experiments on the strength of wooden posts have been conducted by Professor Lanza, of the Massachusetts Institute of Technology, with the aid of a testing machine belonging to the United States Government. The first columns tested were of oak, and had been used in different mills. The posts that were received from mill No. 1 were seven in number, had been in service about six and a half years, and were removed because they were deemed unsuitable. They were all about 12 feet long, about 6½ inches in diameter at the larger end, and 5½ to 6 inches at the smaller end. They were all bored, and the boring was excellent. The load they had sustained was estimated by one of the gentlemen connected with the mill at about 10,600 *lbs.* per column, beside the weight of snow in winter. They were provided at the top with a maple cap surmounted by an oak base on which rested the next column above, or the roof timbers.

Of these columns three were tested between the platforms of the machine, the ends being brought to an even bearing. These broke under loads giving a breaking strength per square inch of cross section (= total load divided by area of smallest section) of 4,602, 6,032, and 4,682 *lbs.* The remainder had the maple cap at one end and the oak base at the other, these resting against the platforms of the machine, and the ends not being specially brought to an even bearing. These broke under loads giving a breaking strength per square inch of 2,943, 3,263, 4,223, and 3,450 *lbs.*

It is to be observed that in only one case does the crushing strength per square inch reach 6,000 *lbs.*, and also that in the case of the last four, when the maple caps and oak bases were used, and the ends were not squared up, the strength averages less than in the first three.

The ten columns from mill No. 2 were taken from the worsted department of the Pacific Mills at Lawrence, where some alterations were being made. Columns A, B, C, D, E, and F were from the first floor of the mill, and the remaining four, G, H, I, and J, were from the second storey. All were about 14 feet long, the first six having a diameter of 10½ inches, the last four of 9½ inches. A, B, and C were tested directly between the platforms of the machine without having the ends specially squared. They broke at 4,265, 3,880, and 4,984 *lbs.* per square inch respectively. D was similarly tested, but had ends squared up, and broke at 4,604 *lbs.* per square inch. E and F were tested with an iron base-plate at one end, and iron cap and pintle at the other, an arrangement the same as that used at the mill. They gave way under 4,662 and 4,838 *lbs.* respectively. Of these posts A was not straight, B had a winding grain, C was quite knotty and appeared shaky near the failure; D, E, and F appeared tolerably free from defects.

The posts G, H, and I were tested directly and without special squaring of ends between the platforms of the machine, and broke under 4,881, 3,433, and 3,981 pounds per square inch respectively. J was tested with pintle in the same way as E and F. It yielded under 3,266 pounds per square inch. These four posts appeared quite defective, owing to knots, bending, &c. All the posts from the Pacific Mills had been in use twenty-five years, and, assuming fifty pounds per square foot as the weight on the roof, and sixty pounds per square foot as the weight on the floor, there would have been a load on each of the first six of 46,400 pounds to 53,650 pounds, and on the last four of 36,800 pounds to 42,550 pounds. (The average load under which the first six broke was about 380,000, for the last four 250,000 pounds.) From mill No. 3 there was one old oak column of whose history nothing was definitely known. Tested between the platform of the machine it broke under 6,147 pounds per square inch.

These eighteen were all the old oak columns tested. It will be noticed that in two cases a strength of a little over 6,000 pounds per square inch is obtained, but that in no other case does the strength exceed 5,000 pounds, and that in one case it fell as low as 2,943 pounds.



The next set of posts consisted of two white oak posts, left untested from November 1881. The first, tested with even bearings against platforms of machine, gave a crushing strength of 3,219 pounds per square inch. A short block of much better quality gave 4,450 pounds per square inch. The second post, which was also a poor one, was tested with an eccentric load ( $2\frac{3}{4}$  inches out from centre). Its diameter was 10.95 inches. It broke under a total load of 170,000 pounds, whereas it would have been 276,480 if it had possessed a crushing strength of 3,000 pounds per square inch.

The remaining blocks and posts were of yellow pine, and were each four in number. A square yellow pine post, about 13 feet long and 10 inches on side, with pintle at one end, broke under 5,220 pounds per square inch. A second square post, same length and about 9 inches on side, tested with one flat end, one rounded end, and vertical axis  $2\frac{1}{4}$  inches eccentric, broke under 280,000 pounds total load. Two yellow pine blocks, each 2 feet long, of square section, respectively 9 inches and 10 inches on side, broke under 5,950 pounds per square inch and 5,452 pounds per square inch. A yellow pine round post, 12 feet long and 8 inches diameter, tested with one flat and one rounded end, had an ultimate strength of 4,662 pounds per square inch. A block 2 feet long, cut from end of this, broke under 3,604 pounds per square inch. A second round post, 14 feet long and 7.9 inches diameter, tested with flat ends, broke under 4,254 pounds per square inch. A 2-foot block, cut from the end of this, broke under 4,892 pounds per square inch. A third round block, 2 feet long and 10.9 inches in diameter, broke under 4,450 pounds per square inch.

Some large spruce beams, broken transversely, varied in size from 4 inches by 12 inches and 20 feet long to 2 inches by 7 inches and 7 feet long. The average modulus of rupture for spruce as obtained from these is about 4,623 pounds per square inch. These are the first experiments made on full-sized beams, and it is, therefore, of interest to compare them with the figures given by various authors and now in general use among engineers:—

Hatfield gives for spruce	...	...	...	13,365	pounds
Laslett	"	"	"	12,210	"
Rankine	"	"	"	11,100	"
Rodman	"	"	"	6,100	"
Trautwine	"	"	"	8,100	"

The latter advises a deduction of one-third for knots, &c., which would leave 5,400 pounds, a result greater than all but two given by any of the tests described.

### DRURY LANE THEATRE.

THE annual meeting of the proprietors of the Drury Lane Theatre was held on the 13th inst. Mr. T. Rawlinson presided, and read the annual report, which stated that the gross receipts, including the balance of 1,362*l.* remaining on June 30, 1881, and 1,000*l.* withdrawn from the deposit account, amounted to over 10,997*l.* The payments reached a total of 9,618*l.*, including a sum of 1,360*l.* for rent paid to the Duke of Bedford, and 3,700*l.* paid to the trustees of the New Renters. Captain Shaw had inspected the theatre, and the Metropolitan Board of Works had made certain requirements for structural alterations. The committee had availed themselves of the right to refer these to arbitration.

Mr. C. J. Phipps, F.S.A., also read a report, in which he stated that many alterations had been made during the past year for the purpose of securing the safety of the public. The partition separating the stage from the auditorium was formerly of boarding only. It had now been covered with a composition of plaster of Paris and coke breeze from the level of the stage floor to the slates in the roof, thereby preventing, in his opinion, the spread of a fire from the upper part of the stage to the roof over the auditorium, for a period sufficiently long to allow the audience to leave the theatre. All the barriers to the several galleries, staircases, and to the pit entrance had been re-arranged and made to work easily. A new exit had been made from the stalls, and the dress circle had been fitted with arm-chairs having lifting seats. The New River Company had made heavy demands as to new fittings for the water service, but these being found necessary, had been carried out. The central chandelier in the theatre was now lighted by the electric spark, the battery being worked by the man at the prompter's box on the stage. This was much more safe than the old system of lighting. The present lessee had well fulfilled his contract, and had kept the place in a good state of repair. The Chairman, in moving the adoption of the report, referred to the statements made in the report of the architect, and said the wall referred to by the latter was considered capable of resisting a fire breaking out on the stage for twenty minutes, and as the theatre could be cleared in eight minutes, there was no doubt, if that were the case, that the wall would be of great assistance in an emergency. The new stall corridor which had been constructed would prevent the cross currents of those from the pit and the stalls meeting in getting out. Alterations in the barriers had been made, in order to facilitate the egress of the public. Captain Shaw, who was sent to inspect the theatre in consequence of a panic arising through the disaster at Vienna, had

reported that the whole of the exits were very satisfactory as far as the lower gallery, and with regard to the upper gallery, though in his opinion it could be cleared in three minutes ten seconds, he thought there should be a second gallery exit. The Committee were of opinion that this was altogether unnecessary. Some of Captain Shaw's suggestions were eminently impracticable; indeed, so much so, that the Metropolitan Board of Works would not adopt them. He suggested a thick masonry wall from the lowest basement up between the auditorium and the stage, and reaching to a height 20 feet above the roof. Practical men said that that would form an admirable trap for the snow in winter, and that a wall rising three feet only above the roof would be much better. In the middle of the "snow tank" Captain Shaw suggested that there should be over the stage a ventilator of a size occupying one-tenth of the snow tank. If such a tank were to be built the only effect would be to send down such a draft as would flap the scenery about, and cause a great deal of danger. Suggestions made as to handrails on the staircases the Committee would do all they could to carry out. Amongst other impracticable things it was suggested that the whole of the scenery should be removed to a distance, and scene-painting and carpentering carried on elsewhere. The lighting arrangements were spoken of by Captain Shaw as very satisfactory, especially in separate sets of meters being provided for the front of the house and the stage, so that an accident on the stage would not put the house in darkness. With respect to the time which would be taken in clearing various parts of the theatre, they were given as follows:—Pit, 5 min. 30 sec.; stalls, dress-circle, and first circle, 8 min. 20 sec.; lower gallery, 4 min. 30 sec.; upper gallery, 3 min. 10 sec. That was when people went out in the ordinary way; but if, unfortunately, there was any panic they would try to leave much more rapidly. Panic was a thing it was difficult to guard against, and it had been found that every one, when a panic did arise, rushed for the door by which he came in, and would not trust himself through a strange door. He (the chairman) would suggest that in the upper and lower galleries they should post notices telling people how long it would take to clear the theatre, and asking them to go out by a certain way. No fire would reach the gallery in three minutes and ten seconds.

### THE RUSKIN MUSEUM AT SHEFFIELD.

A MEETING was held on Wednesday in Sheffield in favour of enlarging and extending the St. George's Museum at Walkley.

Mr. J. D. Leader said it would be remembered that at a meeting held about a year and a half ago a small committee was appointed to confer with Mr. Ruskin as to his views about the museum, but partly owing to the health of Mr. Tozer, who convened the meeting, and partly owing to the state of Mr. Ruskin's health, the matter had been in abeyance for a long time. It was felt, however, in many quarters that the matter should not be allowed to sleep, that something should be done, and Mr. J. F. Moss, with the sanction of Mr. Tozer, had been good enough to take the matter in hand and renew the correspondence with Mr. Ruskin. The result was the meeting then assembled. Mr. Ruskin had been kind enough to come down to Sheffield for the purpose of conferring with them on the subject.

Mr. Bagshawe spoke of the necessity of putting the matter upon a safe legal footing, so that in case of any change in St. George's Guild the museum and its contents should not be liable to dispersal or removal from the town.

Mr. Ruskin explained that his original idea had been a very modest one, namely, to enlarge the present museum at Walkley in the plainest possible manner, but as gentlemen seemed to think it desirable to change the site to one more generally convenient, he was quite ready to place himself in their hands on that point. In consequence of this he had put himself in communication with Mr. Robson, the architect, who had prepared under his advice some plans, which he laid on the table. The style of architecture that he thought most suitable was that which had prevailed in Florence for so many centuries, where ornamentation was produced by the various colours of the material used. Mr. Robson had suggested that in the first instance one section only of the plan should be carried out, and he roughly estimated the cost at 5,000*l.* About the security of the property he was quite ready to agree to any security that Mr. Bagshawe and legal gentlemen in the town might deem necessary. As to the management, he proposed to retain that entirely in his own hands. By management, he said he meant, first arrangement; and secondly, the method of making the collection useful to the student.

A cordial vote of thanks was accorded to Mr. Ruskin for his attendance, and a committee, consisting of Messrs. William Smith, Benjamin Bagshawe, Ald. Pye-Smith, Mr. J. D. Leader, and Mr. Moss was appointed to draw up, in conference with Mr. Ruskin, a definite scheme to be submitted to the public, and Mr. Ruskin said he would place his services entirely at the disposal of the people of Sheffield with the view of attending a public meeting and explaining his intentions.



## BELGIAN IRON.

WE have received the following communication from the Belgian Société Anonyme de la Providence in reference to the letter and table of results of experiments by Mr. Dawney which were published in *The Architect* of February 18, 1882 :—

As the contents of that letter are of such a nature as to throw discredit on Belgian iron imported into England, we cannot pass it under silence. Mr. Dawney quotes several tests made on same, and comes to the conclusion that Belgian products are of an irregular make and mediocre in quality. We must protest against the assertions of your correspondent, which are in great contradiction with industrial facts coming daily under the notice of the public.

For these last twenty years the Belgian ironworks have acquired numerous connections of the highest standing in Great Britain, owing to their moderate prices and the regularity of their products, now so well appreciated by the railway companies and other large consumers.

In fact, it is very well known that in many of your public works Belgian iron is being used to a great extent, for railway companies and engineers are receiving large parcels of same every week, and the iron is submitted to severe tests before being accepted.

If the arguments of Mr. Dawney were serious, how could it be explained that Belgian plates are used for the manufacture of iron bridges, engines, tanks, &c., &c., without any complaint? Why does the Russian Government use it in its dockyards? How is it that your Indian Government has been importing such large quantities of Belgian iron for a number of years? Why do the Governments of Holland and Italy place their orders on the most severe terms in preference with Belgian works? And, finally, how does Mr. Dawney explain that English merchants are now the *largest* buyers and exporters of Belgian iron?

Besides, the arguments of that gentleman are completely annihilated by the good results of Belgian iron tested in England. As on instance, we may add that the Providence Iron Company of Marchienne-au-Pont guarantee their iron to stand the following tests :—

Quality No. 2	...	20 tons	tensile strain to the square inch
" 3	...	22	" "
" 4	...	24	" "

The same company have recently supplied iron girders for your Colonial Government, and the average of eighteen samples tested came to 24 tons per square inch. Without, however, always guaranteeing such high results, the Providence Iron Company offer to do at their works any tests that may be desired by all traducers of Belgian iron.

## THE EXPLORATION OF ASIA MINOR.

THE following circular is about to be issued under the sanction of the Council of the Hellenic Society, advocating the support of a project for the exploration of Asia Minor :—

"Mr. W. M. Ramsay, B.A. Oxon, has been the holder for the last three years of the Travelling Studentship in Archæology, established in connection with the university of Oxford by an anonymous friend of archæological study and research. As holder of this studentship, Mr. Ramsay has been able to visit and explore many of the less known parts of Asia Minor, with results which appear from the articles he has contributed to the *Journal of Hellenic Studies*, and other periodicals. The value of his explorations has also been recognised by the German Archæological Institute at Athens, of which he has been elected a corresponding member.

"With the view of enabling him to continue the work he has begun, an Oxford College is prepared to elect him to an extraordinary fellowship, to be held for a short term of years, on condition of his applying himself to the study of Greek archæology. It is clear, however, that the income of a fellowship (200*l.* a year) is not sufficient to enable the holder of it to travel, least of all in a country like Asia Minor.

"Under these circumstances it is suggested that a fund of 500*l.* should be raised in aid of Mr. Ramsay's work. The Council of the Hellenic Society have resolved to recommend the case as one deserving the support of all those who are interested in Hellenic studies. The money raised for the purpose will be placed in the hands of a committee appointed by the subscribers, who will be charged with its administration."

Mr. Newton, in presiding at the general meeting of the Hellenic Society on June 15, called special attention to Mr. Ramsay's work, and expressed the hope that so staunch an explorer would not be checked in his career for want of effective support. He pointed out that the French, the Germans, and the Americans had all of late been prosecuting very successful researches on Hellenic soil, while England was falling behind in the race. A sum of 100*l.* has already been promised towards the fund, and further contributions may be sent either to Mr. G. A. Macmillan, at 29 Bedford Street, Covent Garden, or to Messrs. Robarts, Lubbock & Co., Lombard Street, to the account of "The Asia Minor Exploration Fund.

## THE PRESTON LIBRARY AND MUSEUM.

THE plans for the intended Free Library, Museum, and Gallery of Art, which is about to be erected at Preston (and the foundation-stone of which will be laid by the Duke of Albany at the approaching Preston Guild in September next) are being prepared by Mr. James Hibbert, architect. The Harris Trustees have granted 50,000*l.* for the erection of the building. Mr. Hibbert, who has erected several churches and other public buildings in Preston, was instructed by the trustees and the free library-committee to visit the chief public libraries, museums, and art galleries in England, as well as the libraries and museums on the Continent, with the view of reporting to the trustees and the committee the character of the building which it would be desirable to erect. The new building will be Gothic in style, in order that it may harmonise with the Town Hall, designed by Sir Gilbert Scott, and which is in the immediate locality. The building will cover a ground area of about 25,000 superficial feet, the site having been given by the Corporation, at a cost of 25,000*l.* In order to obtain the ground the Corporation have had to purchase a considerable amount of property, which will admit of the construction of two new streets, of 50 feet in width each, on the north and south sides of the Library, which will be completely isolated from the neighbouring buildings, and will have four distinct frontages. The principal frontage will be on the west side of the building, facing the open space known as the Market Place, and will be at right angles with the north frontage of the Town Hall. This frontage, as well as the east front facing a spacious new thoroughfare called Lancaster Road, 60 feet in width, will be 130 feet long; the north and south frontages, facing the two intended new streets, being 170 feet in length. In addition to the contribution of 50,000*l.*, the estimated cost of the building, it is understood that the Harris Trustees have agreed to expend 5,000*l.* in books for the library, on the completion of the building; 5,000*l.* in purchasing examples of the fine and industrial arts, and objects of scientific interest; and likewise to place with the Corporation a further sum of 10,000*l.*, on interest at 4 per cent., to be expended annually in additions to the reference library, museum, and art galleries.

## PUBLIC BUILDINGS IN IRELAND.

THE Report of the Commissioners of Public Works in Ireland states that the severe storms of October 14 and 21 and November 21, 1881, caused more or less damage to a large number of the buildings under the Board's charge, not involving any serious outlay at any one, but, from the number of cases to be attended to, and the wide area over which they were spread, there was necessarily a severe pressure on the executive officers. The following new works and alterations have been carried out during the year :—

New coastguard stations have been built at Ballynacourty and Ballyvaughan, and progress has been made with those at Portnoo and Tully, which will be finished during the current year. The conversion into barracks for the Royal Irish Constabulary of sundry bridewells which are no longer required for that purpose has been completed, except at Ballyconnell, in which case the change has been abandoned. The conversion of military barracks to a like purpose has been suspended for the present. The construction of a new barrack at Londonderry has been commenced; that at Galbally, county Limerick, is in a forward state, although there was some difficulty in getting a contractor to undertake the work. A new barrack has been completed at Clonmany, county Donegal. Temporary stabling has been supplied to 76 barracks, and additional portable huts have been supplied, increasing the number to 108.

The works at the Queen's Colleges during the year have been limited to the maintenance of the buildings, the furniture and fittings. A turret-clock and bell have been put up in the tower of Galway College. During the past year the erection of 45 national schoolhouses has been proceeded with at a total cost of 13,744*l.* 18*s.* 3*d.*, towards which the Board paid as grants two-thirds, or the sum of 9,163*l.* 5*s.* 6*d.*, the remaining one-third of the expense being met by local contributions. Various additions to and enlargements of schoolhouses, together with such structural improvements as providing timber flooring, wainscoting, tablet rails, eave gutters, &c., erecting porches, building enclosing walls and gates, have been carried out at 33 ordinary literary national schools, at a total cost of 1,627*l.* 1*s.*, of which the Board paid two-thirds, the remaining one-third having also been locally contributed. Besides this outlay, the Board have expended in new works and alterations, repairing and maintaining the Metropolitan (or Central) Model School Buildings, and the District Model, Minor Model, and Model Agricultural Schools, the sum of 7,886*l.* 1*s.* 10*d.*, and a further sum of 1,780*l.* 18*s.* 8*d.* for furniture for those buildings: on the ordinary literary national schools in charge of the Board a sum of 3,287*l.* 0*s.* 4*d.* has been also expended in works of maintenance and repair.

On October 30, 1880, the Irish Church Temporalities Commissioners, acting under the provisions of the 25th section of the Irish Church Act of 1869, made an order amending and consoli-



dating their former orders of October 27, 1874, December 16, 1874, and December 12, 1877. By that new order the number of buildings transferred to the Board for preservation as national monuments was increased from 119 to 137. Of this number the necessary works for arresting dilapidation and insuring future preservation have been carried out at 72, and partly at four more, which are in hand, while of those included in the order there are four at which either no trace of the building has been discovered, or so little as to leave nothing worth preserving, or which require no work of repair. There are 17 cases of pre-historic remains, such as stone forts and beehive cells, to which scarcely anything can be done beyond protecting them from further injury; and there remain 32 monuments, chiefly of small size, the repairs of which have not yet been commenced. The outlay up to the present time has been 20,556*l.* 17*s.* 8*d.*, and there remains to credit of the account—Three per Cent. Stock, 39,848*l.* 4*s.* 2*d.*, and a cash balance of 230*l.* 13*s.* 4*d.*

### LEGAL.

**Manchester Assizes (Nisi Prius Court).—July 18.**

(Before Mr. Justice NORTH.)

**HARWOOD & SON v. THE CORPORATION OF BOLTON.**

DEFECTIVE SEWERS.

This action was brought by Messrs. Harwood & Son, cotton spinners, to recover 147*l.* as compensation for damage which they sustained on the night of July 5, 1881, by the flooding of a cellar in which was stored a considerable quantity of yarn. This damage, the plaintiffs allege, was caused by the negligence of the defendants in not providing sewers that would carry away the surplus water after a heavy fall of rain. The chief contention of the defendants was that the rainfall was so excessive on the night in question that they could not be held responsible for the damage that ensued, and that therefore it ought to be considered the "act of God." An *employé* of the Corporation stated that he had gone along the sewers near the mill of the defendants and found them on an average 2 feet wide and 2 feet high. At one place they were 2 feet 6 inches high, and at another 1 foot 11 inches. Mr. J. W. Wardle, assistant surveyor to the Corporation, produced certain plans showing the levels and the capacity of the sewers in question. Mr. James Mansergh, C.E., stated that he had had twenty-five years' experience as a civil engineer, and had carried out sewage works in fifty or sixty towns in this country. The particular sewers in question were capable of discharging an inch of rainfall running off in an hour, which would be equivalent to a fall on the ground of 1½ inch in an hour. He believed the flooding of the cellar of plaintiffs' mill arose from an exceptional fall of rain, which, if he had been constructing the sewers, he should not have felt his duty to provide for. Mr. Robert Vawser, C.E., stated that exceptional rainfalls could not be provided for. It was not the practice for engineers to construct sewers capable of carrying off a fall of 1½ inch of rain in an hour, and he was of opinion there were very few sewers in any part of Lancashire or any other county that would carry off that amount. It was undesirable on sanitary grounds to make sewers larger than was necessary, and from his inquiries and examination he held that the sewers near the plaintiffs' mill were sufficient to carry off the ordinary heavy rains falling in the district. Replying to a question, witness said he had never known a system of sewers which would take off a rainfall of 2·03 inches in two hours, which it was stated fell on the night of July 5, 1881. Mr. James Farrar said he considered the sewers sufficient for the purpose for which they were constructed, and if he were called upon to draw up a drainage scheme he should never think of providing for such an excessive amount of rain as that which fell on the night in question.

The jury returned a verdict for the plaintiffs for the amount claimed, with costs. On the application of counsel for the defendants execution was stayed until November.

**Salen.**—The new Free Church at Salen, Mull, which has been designed in the Early English style of architecture, will be seated for 250, and is cruciform on plan, the nave being lighted by simple lancet windows in the sides; and in end opposite pulpit by a large three-light window with circular top filled with cinquefoil tracery; and the transepts by three-light lancets. All the windows will be glazed with tinted cathedral glass in lead quarries; the porch, with deeply-moulded arched doorway, will be near the north-east angle of nave. Over the junction of nave and transept roofs will be placed an octagonal *flèche*, the lower part forming a ventilator and the upper part a belfry. At the end behind pulpit will be placed the vestry and other accommodation. The walls will be built of the local whinstone, square-dressed, with dressings of white freestone. The roof principals will be exposed but plastered between, and the interior woodwork will be of pitch pine. The cost will be about 1,100*l.* The contractors are Messrs. McDougall & McDonald, Tobermory; and the architect is Mr. John C. Hay, Edinburgh.

### CHURCH BUILDINGS AND RESTORATION.

**Newcastle-on-Tyne.**—The foundation-stone of a church to be erected at the corner of Grainger and Blackett Streets has been laid. Plans for the building have been prepared by Mr. J. L. Banks, architect, London. The style is thirteenth century, the basis of the plan being a Greek cross. Accommodation will be provided for between 900 and 1,000 persons. There will be six entrances. The church will be surmounted by a large tower-*flèche*. Behind the church will be schools to accommodate about 800 children, having twenty rooms available for class-teaching. The buildings will be of stone. Mr. W. Scott, of Newcastle, is the contractor. The building will cost about 11,000*l.*

**Burton-on-Trent.**—A new Wesleyan chapel is to be erected in place of the present one in Byrkeley Street, which is found to be now too small. The chapel is to be erected on the present site, together with vestry, general schoolroom, an infants' room, and five classrooms. The chapel will seat 700 people, and the cost of the work will be about 2,200*l.* Mr. C. F. Underhill is the architect, and the contract has been let to Mr. H. C. Mellors.

**Ladybank.**—A new church erected in the Ladybank district of Collessie parish, Fifeshire, has been opened. The church has been built from the plans and designs of Mr. Walker, architect, of Circus Place, Edinburgh; Mr. Ogilvie, of Kirkcaldy, being the clerk of works. The church provides for the accommodation of 400 persons.

**Rawcliffe.**—The foundation and memorial stones of a Primitive Methodist chapel at Rawcliffe have lately been laid. The new chapel is being erected on a plot of land purchased from Mr. Creyke, M.P., from designs by Mr. Howdill, architect, of Leeds, the contractor being Mr. Enoch Meggitt, of Thorne. The building will seat 300 persons, and is estimated to cost 700*l.*

**Coventry.**—The foundation-stones of a Baptist Chapel in Queen's Road have been laid. The chapel is designed to accommodate about 800 persons. In the rear of the chapel will be school buildings. A chapel-keeper's house will be erected on the north-west side of the premises. The exterior of the chapel will be of pressed red brick, with bands, strings, tracery of windows and other dressings of stone; the interior fittings of the building will be of varnished pitch pine. The cost of land, chapel, schoolroom, class-rooms, and chapel-keeper's house, is expected to be about 10,000*l.* The architects are Messrs. G. & I. Steane, of Coventry, and the builder Mr. John Worwood, also of Coventry.

**Cobridge.**—The Catholic church here has lately been reopened after extension. A portion has been taken down and a new chancel added, the building being lengthened something like 30 feet. The old building would accommodate between 400 and 500, and additional sitting room has been provided for more than 100. The work has been done by Mr. E. Emery, of Cobridge, from the designs of Messrs. Goldie, Child & Goldie, architects, London. The new high altar has been supplied by Messrs. Harrison & Sons, of Dublin.

**Bath.**—The corner-stone of a new chancel to St. Stephen's Church, Lansdown, has been laid. A new vestry and organ chamber are also to be built. The new chancel will be 27 feet by 21 feet 6 inches; vestry, 14 feet by 17 feet 6 inches; organ chamber, 12 feet by 17 feet 6 inches. The chancel will have an apsidal end, and will be lit by three two-light windows. The additions are designed in the Decorated style to harmonise with the rest of the building, and the work is being carried out by Messrs. Morgan & Lovell, of Bath, from the designs of Mr. Wilcox, architect.

**Staverton.**—The parish church of St. Paul has been reopened after renovation. The church is large, and consists of chancel, nave, north and south aisles, tower, and porch. The aisles run the length of the church, and a perpendicular screen separates the chancel. The work has been carried out by Mr. Evans, of Paignton, under the direction of Mr. Ewan Christian.

**Sal.**—The foundation-stone of a new church has been laid. The style is Early English, and the material used will be brick with Yorkshire stone facings and Hollington stone dressings. The plans show a nave of 89 feet in length and 30 feet wide, and two aisles 89 feet by 12 feet, an organ chamber on the south side of the chancel, and clergy and choir vestries on the north. The spire will rise to a height of 130 feet. The nave arcade will be supported on polished Peterhead granite columns, with Yorkshire stone dressing, caps and bases. The seats and other joiners' work will be of pitch pine, stained and varnished. The church will accommodate over 700 persons, and will have a special extra exit. The architect is Mr. H. R. Price, of Cross Street, Manchester; and the contractor, Mr. James Herd, of Ardwick.

**Ebbw Vale.**—The opening of Cwm Church has lately taken place. The building, which is designed in thirteenth-century style, is capable of accommodating 400 persons. The cost of construction has been about 1,400*l.* Mr. Norton, of Old Bond Street, London, is the architect, Mr. Jones being the contractor.

**Levenshulme.**—The foundation-stone of a new Catholic church at Levenshulme has lately been laid. The church, which is to be



dedicated to Our Lady of Mount Carmel and St. Clare, is designed in Early English style, and the cost of erection, it is estimated, will amount to about 2,000*l*. Accommodation will be provided in the church for 150 persons. The work is being carried out by Mr. J. L. Ward and Mr. James Corcoran, builders, from the designs of Mr. H. E. Tijou, architect.

**Downside.**—A portion of the new church at the Benedictine Monastery and College, Downside, has been opened. The church when completed will measure more than 350 feet, the nave being 140 feet. The internal length of the eastern portion, exclusive of that nave, but including the easternmost bay of the nave, which is already built, will be 220 feet, the extreme breadth across the transepts being nearly 90 feet; clear breadth of nave and choir, 28 feet, and transepts 25 feet; internal height to the top of the groining in the centre of the building, 66 feet. The church will have a nave and choir as broad as that of Norwich Minster, considerably higher than the venerable cathedrals of Chichester and Lichfield, and higher in proportion than the neighbouring cathedral of Wells. The present erection consists of the centre of the complete church, being the crossing together with the north and south transepts and the tower (30 feet square) at south end of south transept, and one bay of the nave and choir with their aisles. This portion has cost 15,000*l*., and it is estimated that the cost of the entire work will be little under 100,000*l*. Messrs. Dunn & Hansom, of Westminster Chambers, London, and Newcastle-on-Tyne, are the architects, and the builder is Mr. J. Bladwell, of Bath.

**Teignmouth.**—The church at East Teignmouth has been reopened after considerable improvements, which have been carried out from plans prepared by Mr. R. Medley Fulford, architect, of Exeter. The church has also been re-seated with benches of modern pattern, sitting accommodation being provided for 847 persons. The work has been carried out by Mr. Robert Davis, of Newton.

**Leckhampton.**—A new mission chapel has just been opened at Leckhampton, Cheltenham, from designs of Messrs. Chatters & Channon.

**Stonehouse.**—Mr. Snell, architect, of Plymouth, has designed a pulpit for St. George's Church, Stonehouse. The design is Classic. On plan it is hexagonal, and is supported by six monolith detached shafts of red Ippelen marble, which rest upon black marble bases. The capitals carrying the body of the pulpit proper are of grey marble; above which is a red marble frieze relieved at intervals by bosses of Yealpton green marble. The pilasters in the upper part, like the columns below, are of Ippelen marble, and the whole is surmounted by a frieze in grey marble.

**Lytham.**—The enlargement of the parish church carried out by Mr. Saul, contractor, of Preston, from the designs of Messrs. Paley & Austin, has been completed. The work includes a new aisle at the north side, 80 feet long 32 feet high to apex, and 11 feet 8 inches wide, and a new vestry and organ chamber. The materials used are hand-made good hard bricks, old English bond, and Longridge stone for window bases, cornices, strings, copings, buttresses, and battlements, the new wing being entirely in keeping with the other portions. The roof is a plain span and covers the old as well as the new north aisle.

**Eastbourne.**—The new All Souls Church was opened on the 6th inst. The style is Lombard Byzantine, a development of the old Byzantine and later Romanesque, adopted in Italy towards the end of the sixth century. The subsoil being very bad, the concrete foundations had to be carried down 17 feet to 20 feet. The building consists of nave, north and south aisles, chancel, chancel aisles, apse, and tower, the latter connected with the church by a short arcade. The external dimensions are 127 feet by 68 feet by 51 feet to ridge of nave; internal ditto, nave, 86½ feet by 33 feet by 39 feet to plate, or 49 feet to top of open timber roof. The north and south aisles are each 75 feet by 13 feet by 18 feet to plate, or 26 feet to top of lean-to roof. The chancel is divided from the nave by an arch 24 feet wide, 37 feet high, and measures 19 feet by 33 feet by 38 feet to wooden ceiling. The apse, having a 12-foot radius, contains seven windows, with spherical stone vault over and a reredos in Caen stone. The north chancel aisle of 19 feet by 13 feet is arranged as a vestry, whilst the corresponding south aisle contains the organ by Messrs. Bishop & Sons. The campanile at the south-west corner is 16 feet square by 83 feet in height, and contains a clock with four faces by Messrs. Dent & Co., and a peal of five bells by Messrs. Mears & Stainbank. The materials of the church are Keymer bricks and buff bricks from Tamworth, with red and buff terra-cotta by Messrs. Gibbs & Canning, of Tamworth. Internally the walls are lined with Burham bricks, and the stone arcading is in white and blue Corsham. The latter, as also the pulpit, desk, font, and mosaics were executed by Messrs. Farmer & Brindley, of London. The handsome corona of 60 jets, the hanging lamps, and the pulpit rail, were prepared by Messrs. Hart, Son & Peard; the tile floors and writing by Messrs. Simpson & Sons; the iron railing by Messrs. Johnston Bros. The contractor for the general work was Mr. James Peerless, of Eastbourne, and the clerk of works Mr. Walter Peart. The total cost has been about 18,000*l*., and the whole of the work was carried out from the designs

and under the directions of Messrs. Parr, Strong & Parr, architects, London. An interior view of the building was published in *The Architect* of August 20, 1881.

## SCHOOL BUILDINGS.

**Bury St Edmunds.**—The memorial-stone of a new grammar school has been lately laid. The building will contain basement, ground-floor, and first and second floor. The ground on the east is 6 feet higher than on the west, and on this side the basement comes out of the ground. The basement floor contains, in the southern part, the great schoolroom, 50 feet by 24 feet, and 14 feet high. There is a classroom at both ends. There is no communication between this and the northern portion of the basement, which contains kitchen, scullery, larder, butler's pantry, house-keeper's room, servants' hall, cellars, &c. In the southern portion over the schoolroom there are on the ground floor the studies and classrooms, on the first floor the dormitories, as also on the second floor. Corridors connect these floors with the corresponding floors in the northern portion, where, on the ground floor, is the entrance to the master's house and his dining and drawing rooms, with the large dining-hall for the boys. Between these rooms and the school there is behind the dining-hall a lavatory and douche. On the first floor there is the continuation of the master's house, matron's bedroom and sitting-room, and other rooms for boxes, linen, &c., and higher up on the second floor are day and night nurseries, sick-room, attendants' room, baths, &c. There is a lift from top to bottom of the building. The materials of the building are red Suffolk bricks, with moulded string courses, labels over the windows, and raised panels under the dormitory windows. The roof will be covered with plum-coloured Broseley tiles, and the upper part of the master's house will be weather-tiled, half the bricks being plain and half ornamental. The architect is Mr. A. W. Blomfield, of London, Mr. Browning is clerk of works, and Messrs. Grimwood & Son, of Sudbury, are the contractors.

**Kidderminster.**—New Baptist Sunday-schools have lately been opened in connection with the Baptist Church. The new buildings have been erected at the rear of the church, and accommodation is provided for 600 children, at a total cost of about 2,400*l*. Mr. Ingall, of Birmingham, is the architect, and Mr. R. Thompson the builder.

**Cardiff.**—The foundation-stone of a Wesleyan Methodist School Chapel, on Crwys Road, has been laid, the site being sufficient for a larger chapel if required later. The building will be of Newbridge stone with Bath stone dressings, the style being Gothic. The plans are by Mr. J. P. Jones, architect, and the contract (amounting to about 1,500*l*.) has been taken by Mr. D. Davies.

**Cheltenham.**—New schools are to be erected at Cheltenham, from designs by Messrs. Chatters & Channon, of Birmingham and Cheltenham, which were recently selected in competition.

**Cost of School Buildings.**—At the opening of the Smedley Road Board School, Cheetham, on Wednesday, it was stated that the cost of school building in Manchester compared favourably with that of other localities. For instance, the average cost per child for schools in Bradford had been 20*l*. 15*s*. 8*d*.; London, 18*l*. 1*s*. 4*d*.; Sheffield, 16*l*. 6*s*. 9*d*.; Leeds, 15*l*. 10*s*. 5*d*.; Liverpool, 15*l*. 7*s*. 3*d*.; Birmingham, 14*l*. 6*s*. 11*d*.; and Manchester, 12*l*. 15*s*. 9*d*.

## NEW BUILDINGS.

**Tobermory.**—A new hotel is being erected at Tobermory island of Mull, N.B., for Mr. Caldwell, of Hanover Terrace, Regent's Park. It will contain a dining-room 42 feet by 20 feet, drawing and ante-drawing-rooms, billiard-room, commercial-room, parlours, thirty-five bedrooms, kitchen, and other necessary accommodation. Stable offices are to be erected adjoining. For the rubble work blue whinstone, quarried free near the site, is used, all the dressings being of red freestone from the island of Arran. The cost of the whole works is not expected to exceed 4,500*l*. The contractors for the various works are Mr. D. Fletcher, mason, Tobermory; Mr. W. Menzies, joiner, Oban; Mr. A. Warwick, plumber, Tobermory; Mr. D. Craigie, plasterer, Edinburgh; Mr. J. Renton, slater, Edinburgh; Mr. D. Small, glazier, Edinburgh. The style adopted is a modified form of Scotch baronial. The architect is Mr. John C. Hay, Edinburgh.

**Pathhead, N.B.**—Plans, prepared by Messrs. Campbell Douglas & Sellar, architects, of Glasgow, have been selected for the erection of a new public hall at Pathhead. The hall will be 70 feet long by 44 feet wide, and will accommodate on the floor of the building 684, and in the gallery 120. Provision is also made for an adjoining reading-room, library, and billiard-room. The hall will be well lighted from the range of five windows on each side of the building, and by a large window in the gable. The style will harmonise with the surroundings, and the architecture of the district. It is estimated that the total cost of the building, including site, will be about 3,000*l*.



**Torquay.**—The foundation of a sanitary hospital to be erected on the Newton Road has been laid. The building, when completed, will provide accommodation for the treatment of twenty patients, in six wards, four wards containing four beds each, and four single-bedded wards, but at present only half the number of wards are being built. The plan takes the form of the letter H, and consists of two blocks of ward buildings connected by an open corridor. In the centre of this corridor is the administrative block, and in the rear are the single-bedded wards. The larger ward buildings will consist of two wards, with beds for four patients; nurses'-room, with windows overlooking the wards; bath-room, &c. The single-bedded wards are arranged in two isolated blocks, each block containing two wards, with nurses'-room between and overlooking them. There will be two detached buildings in the rear of the main premises, one comprising wash-house, ironing-room, drying-closet, and disinfecting chamber, and the other a mortuary and ambulance shed. Bricks will be used for the construction of the building. The architect is Mr. Ernest Turner, of London; and Mr. W. Trevena, of Plymouth, is the contractor.

## ENGINEERING WORKS.

**The New Bridge over the Lea.**—The Hackney Board of Works have at last instructed their General Purposes Committee to proceed with the erection of the long-talked-of new bridge over the River Lea, at Temple Mills. Some difficulty was presented by the occupiers of the contiguous land, who required the Board to fence in the marshes, and the lord of the manor threatened an injunction unless efficient approaches were made. To obviate these obstacles the bridge is to be constructed nearer the present ford and further from the owners' rights than originally contemplated. The bridge will form a direct access from Hackney to Leyton and other important places on the Essex side of the river, which can only be safely had now by a long, circuitous journey for vehicular traffic round by Lea Bridge Road on the north and Mile End Road and Bow on the south. The Metropolitan Board of Works will contribute a moiety of this much-needed improvement.

**Wick.**—Plans for the improvement of the harbour have been adopted by the Pulteney Harbour Trustees. The works include an extension of the south breakwater 600 feet, the north breakwater 700 feet, deepening and refacing existing harbours, new harbour on north side of the present north pier, including the widening of the present north pier, the boat basin with its quays, and the embankment; a new bridge, a new north harbour, dredging, &c. The cost of these works, setting aside a sum of 8,000*l.* for contingencies, is estimated at 110,000*l.* The plans have been prepared by Mr. Barry, C.E.

**Ayr.**—Works of improvement at Ayr Harbour have been decided on by the Harbour Trustees. It has been resolved to extend the south pier at a cost of 5,600*l.* It is proposed to drive piles round about, and to fill the space between this and the present pier with concrete. The new pier will be 16 feet wider, or double the width of the present. The contractor for the work is Mr. Lane, of South Shields.

## GENERAL.

**Dr. C. W. Siemens, F.R.S.**, has been elected Chairman of the Council of the Society of Arts for the ensuing session.

**Mr. Harris**, of Dundee, has offered to defray the cost of a plan of ventilating and heating the High School, Dundee, which will amount to 1,500*l.*

**Messrs. Heaton, Butler & Bayne** have completed a stained-glass window for a music-room in Christchurch, New Zealand, which will be on view on Monday next at their show-room.

**Mr. Silvanus Trevail** has prepared plans for a post-office and dwelling-houses to be erected on the site of the dilapidated buildings in Honey Street, Bodmin, which are to be pulled down. Mr. S. Lang, of Liskeard, is the contractor for the work.

**Messrs. Edmundson & Co.** have obtained the contract for lighting the National Exhibition buildings in Dublin, which will be opened on August 15.

**Messrs. Lander & Bedells**, of 6 John Street, Bedford Row, were appointed the Surveyors to the London Estate of the Harpur Charity, Bedford, on the 13th inst. The number of candidates who applied for the appointment was between 90 and 100. In the final vote Mr. S. Flint Clarkson, of Great Ormond Street, was second. The estate in question is between Bedford Row and Southampton Row, Holborn, and consists of some 300 houses, with a rental of about 14,000*l.* per annum.

**The Dean of Bangor** has made an appeal for funds to complete the principal tower of Bangor Cathedral.

**An Exhibition** of the pictures purchased at the sale of the Hamilton collection for the National Gallery will be opened shortly. The pictures will be hung on screens.

**Messrs. Robert Boyle & Son's** system of ventilation is the one applied at the Police Orphanage, Twickenham, a new wing of which was opened on July 8 by H.R.H. the Prince of Wales. Messrs. Boyle have also secured the ventilation of the new Royal Courts of Justice Chambers, at present being erected in Fleet Street.

**The Northwich Town Surveyor** has condemned the Town Hall as being in a ruinous and dangerous condition.

**Plans** have been submitted to the Aston Local Board during the year ending March 25 last, and approved, for the erection of 354 dwelling-houses, four manufactories and workshops, one school, one brewery, and sixteen other erections.

**The Commissioners of Sewers** have adopted a committee report deciding not to proceed further at present with the electric lighting of the City, owing to the cost of the electric light, and in view of the Bill before Parliament to confer upon local authorities the power to supply electricity for public and private purposes.

**A Memorial Tablet** is to be erected in Westminster Abbey in recognition of the disinterested services of the late Colonel Chester as editor and annotator of the "Westminster Abbey Register." Colonel Chester was a native of the United States of America, but had for many years been resident in England, where his reputation as an authority on all genealogical questions was unrivalled. His valuable papers, the result of many years of unwearied and discriminating industry, are in the hands of Mr. Cokayne, Norroy King of Arms. His work on the "Westminster Abbey Registers" (which forms the tenth volume of the publications of the Harleian Society) was printed in 1876, and was dedicated by permission to the Queen.

**A Statue of Mariette Bey**, the Egyptologist, was unveiled on Sunday in Boulogne. It is erected on the Esplanade, and stands upon a pyramid bearing the titles of his principal discoveries.

**The Society of British Artists** have elected Mr. Carl Haag an honorary member, and Messrs. Fred Barnard, Edward F. Brewtall, John Charlton, A. H. Marsh, John Scott, J. D. Watson, T. J. Watson, and R. C. Woodville members.

**The Council of the Society of Arts** have presented a memorial to the Secretary of State for India in Council, calling his attention to the great and growing demand in India and the colonies for the services of persons skilled in forest cultivation. The memorialists believe that no suitable provision exists at any of our great centres of instruction for the teaching of natural science in special reference to forestry, and they express an earnest hope that steps may be taken by the Indian Council to establish a department for such teaching in the Royal Engineering College at Cooper's Hill.

**The "Scientific American"** says the wrought-iron columns for the Albany bridge are said to be the largest ever made. The length of each is 53 feet 3½ inches. Each is composed of eight segments, the iron of which is 1 9-16 inch thick. Each column requires 894 steel rivets, and the weight complete is 18,806 pounds. The square inches of section are 104. The eight columns, therefore, contain 150,448 pounds of metal and 7,152 rivets.

**Wages in Edinburgh.**—A meeting of the Edinburgh and Leith Master Builders' Association was held on Monday last. Reports were received of 7*d.* per hour having been paid to builders at a few jobs in the suburbs, and 6*d.* per hour to hewers in the centre of the city; but it was stated that the general rate of wages at present for both hewers and builders appeared to be 6½*d.* per hour. Finally it was resolved that within the municipal boundaries of Edinburgh and Leith the wages for both hewers and builders be 6½*d.* per hour, and that where no shed accommodation was provided ¼*d.* per hour extra be paid. It was also resolved to request the Edinburgh Architectural Association to make universal the practice of a few of their number of intimating to competitors when a tender was accepted or declined.

**The Avenue Theatre.**—One result of the passage of the South-Eastern Railway Bill through both Houses of Parliament will be the demolition of the newly-erected Avenue Theatre on the Thames Embankment, which, in common with the whole of the eastern side of Craven Street, Strand, is scheduled in the Bill as a part of the property required in order to carry out the authorised widenings and extensions at Charing Cross Station.

**Whitworth Scholarships, 1882.**—The following are the successful competitors in the order of merit:—200*l.*: Charles Webster, Crewe. 150*l.*: J. H. Tomlinson, Newcastle-on-Tyne; J. H. Beaman, Woolwich; Thomas Turner, Sheffield; S. D. Codrington, Bristol; C. B. Outon, Stratford; G. H. Bannister, Woolwich; Frederick Lane, Woolwich; W. D. Laird, Woolwich. 100*l.*: Joseph Parry, Manchester; A. F. Ravenshear, London; C. W. Carter, Liverpool; A. Barrow, London; H. C. King, Swindon; M. Douglas, Crewe; Thomas H. Gardner, Manchester; E. E. Haine, London; George Halliday, Glasgow; G. W. Buckwell, Brighton; L. H. Cochrane, Liverpool; W. Duncanson, Stratford; H. Brown, Dudley; W. T. Hatch, Liverpool; T. Carlyle, Woolwich; A. J. Hill, Stratford.



# The Architect.

## THE LONDON TURNPIKE GATES.



ANYTHING more astonishing to the stranger than the circumstance that such a relic of feudalism should exist in London as turnpike gates which place the public traffic of important thoroughfares at the mercy of private individuals it would be difficult to imagine. Yet this is only a mild way of stating the fact. The turnpike

gates more properly so called—those for the collection of reasonable tolls in the public interest for the maintenance of the roads—have been abolished for miles round by the simple expedient of constituting the maintenance of the roads a charge upon the public rates. Even the Thames bridges have been relieved from such gates by purchase from the proprietary bodies which had originally built them as private adventures. In both cases the cost was fairly counted and fairly paid. The barriers which still remain are not established for the collection of tolls; neither do they apply to proprietary bodies; they cannot be bought off because there is nothing to buy; and it is for this very reason, perhaps, that their assertiveness is all the more resolutely supported, alike in defiance of the public convenience and the public common sense.

The press has long been keeping its eye upon these remarkable relics of departed tradition, and lately the wise *Punch* in particular has found its way to a highly-amused observation of them. A return of their actual number, also, has been called for by Parliament, and duly delivered. Something may therefore be done about them some of these days; and it may not be amiss if in a journal like *The Architect* an endeavour be made to explain what they really and practically are.

These London gates are numerous—there are nearly fifty of them; and they are capable of classification into several categories. The Crown itself—that is, the authorities of the public lands—maintain a good many of them; but as these are kept up chiefly if not altogether for the protection of the parks, they are not at all of the same character as the others. The Duke of WESTMINSTER has some in Pimlico. The Duke of BEDFORD has some in Bloomsbury. In practice those of the Duke of BEDFORD are so prominently and wantonly outrageous that it is not worth while to trouble ourselves with any of the rest.

In the time of the early GEORGES Bloomsbury was the Duke of BEDFORD's private grounds; and readers of THACKERAY may remember that one of his "Virginians," occupying suburban lodgings in Southampton Row, went out to fight a duel where it would appear Torrington Square now stands (of which we shall have something to say presently), Tottenham Court Fields at the back of Montague House, having in one direction Hampstead Hill in full view, while in another the statue on the steeple of St. George's Church overlooked the meeting—which was disturbed, by the way, by "two of Sir JOHN FIELDING's men" from Bow Street. The Duke of BEDFORD accordingly remains the freeholder of the land which was once his ancestor's paddocks; he receives ground rents for all the houses; and he is now becoming more vastly wealthy every day by taking the houses themselves and letting them at high rack-rents. Probably there is no other great freeholder in London with whom the relations of landlord and tenant are more entirely brought down to the level of pure business.

By what process of over-persuading the Legislature the Dukes of past time succeeded in preserving their authority over the thoroughfares of Bloomsbury, while they cast upon the public all the burden of making and maintaining those thoroughfares and building the houses, it would be quite unprofitable either to describe or to inquire; if we may make use of a celebrated formula of the Elizabethan age, "then was then and now is now," but what in this year of grace 1882 the public of London have to submit to as the anomalous result may be easily described. Everybody knows Tottenham Court Road and everybody knows Gray's Inn Lane. They lie in parallel lines rather more than three-quarters of a mile apart; and at their northern extremities they run into the

Euston Road at right angles. The portion of Euston Road lying between them has on its further side the three railway termini of the North-Western, the Midland, and the Great Northern lines. Between these great foci of the traffic of the United Kingdom and what is virtually almost the whole of London there lies the district of Bloomsbury. Now there is a street called Judd Street running parallel to Gray's Inn Road a little way westward. It would be a useful thoroughfare into the town but for the fact that it is cut short off at the Foundling Hospital. Between Judd Street, however, and Tottenham Court Road—which are five-eighths of a mile apart—there are six streets running southwards from the Euston Road through Bloomsbury. Of these six thoroughfares—will it be believed?—*every one is obstructed by a gate*, with a livery servant of the Duke of BEDFORD frowning back the traffic on both sides! The streets are Gower Street, Gordon Street, Taviton Street, Endsleigh Street, Upper Woburn Place, and Mabledon Place; and, if we are rightly informed, the very cabs going to and from the railway stations are stopped from passing through, whilst all vehicles whatever which are not stopped are permitted to pass by mere favour of the Duke of BEDFORD.

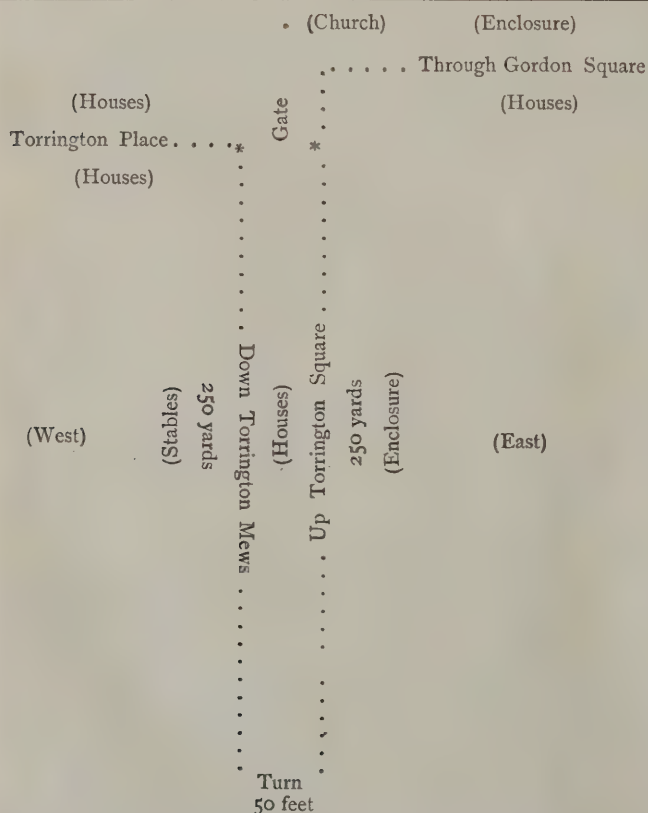
We may admit that the world has not yet reached that point of fatuity at which such an arrangement could be supposed to exist without an ostensible object. No doubt the Duke of BEDFORD has inherited an object of some sort, although what it is we may not so easily discover. But one thing is certain enough, that the public of London have no object in maintaining these barriers; and the idea that the denizens of Bloomsbury have any desire that they should be maintained we take leave to deny utterly.

The only object which we can suppose possible is the protection of the Duke's rents; but how far even this purpose can be served the reader must judge. In Russell Square, Bedford Square, Bloomsbury Square, and the surrounding quarter, for instance—by far the most valuable part of the estate—no impediment whatever exists to the passage of public traffic even of what may be the most obnoxious kind; it is only the second-rate squares more northward which are "protected" after all, and the way in which they are protected let us explain by an illustration. The reader no doubt knows the great Irvingite church in this neighbourhood. It stands at the northern end of Torrington Square, some way behind the British Museum. There comes past it from the west a very good and convenient street called Torrington Street. Close at the back of the houses of Torrington Square there is a narrow dirty parallel lane called Torrington Mews. The distance between this mews and the square is no more than 50 or 60 feet. Between the mouth of the mews and the end of the square there is a gate, indeed the principal gate of all gates, by which the traffic through Bloomsbury eastward is impeded just as it is northward at the Euston Road, but with a peculiar reservation which is almost incredible. The janitor in the ducal livery who is on duty does not allow vehicles (except of certain approved kinds) to pass; but his practical function is simply to *make the traffic go down the mews on one side of the gate and come up the square on the other side of the gate*, or down the square and up the mews, as the case may be. The diagram on the next page (which is set up to scale) will explain this eccentricity of arbitrary rule. That is to say, if a coal waggon or baker's cart has to pass from one side of the gate to a house on the other (literally), gruff Mr. Janitor sends it back into space, and a kind neighbour directs it in pity to go down on one side of the gate almost half-way to Holborn, and come up on the other, whereby, after traversing actually not far short of one-third of a mile, the astonished and indignant carman finds himself *through the gate!* On each side of the gate, therefore, the traffic which is presumably obnoxious to the Duke of BEDFORD's private interests is in absolutely undisturbed possession of the soil of Bloomsbury north as well as south, but the distance occupied by the thickness of the gate itself must not be crossed! It remains only for us to add with pleasure that the guardian of this remarkable obstruction is as inflexible as he ought to be; it would entirely spoil the farce if a silver key would open his gate. It is to be hoped, therefore, that his wages are of the best if his dwelling hard by is of the smallest, for anything more monotonously repugnant to the human nature of even the Bumble of a Duke than his dreadful duty of contending all day long with oburgatory London drivers in the interest of frivolous and vexatious arbitrary authority, one can scarcely conceive. Not long ago even a cab was not allowed to pass



through this barrier unless occupied by a fare. Cabby therefore would take up a street arab for the occasion, or a servant maid, and whisk hilariously through. The public laughter thus provoked all day long caused the Duke to remove the restriction so far as cabs are concerned,\* but the daintiest tradesman's trap in London, carrying the daintiest load, must still rattle down the dirty mews and up the adjacent square before it can pass into Bloomsbury! It reminds one of the fine potentiality of the Duke of ARGYLL in SCOTT'S romance; and the long-suffering of the metropolitan public recalls to mind the prudent counsel of the Highland mother to her peccant son, that he should go up quietly and be hanged in order to please the laird. The traffic of London in the very heart of the town submits to be strangled in order to please the laird.

Now, what can really be the object in maintaining an authority so vexatious, and yet so foolish, as this example proves it to be? To come at once to the point, is it for the sake of getting compensation out of the public purse? It would be hard to assign any limit to the theory of vested interests which our House of Lords, and by no means a small proportion of our House of Commons, may be found to hold, but surely we may be permitted to hope that the Legislature will never be induced to direct the metropolitan ratepayers to pay the Duke of BEDFORD a single shilling for the surrender of such a privilege as is here in question. We should be glad to be able to take a more liberal view of the case than this; but if it be not to establish a claim to money compensation, the only other object would seem to be a mere arbitrary assertion of wanton authority as an express insult to public opinion; which would be almost a less creditable explanation than the other. If the ducal rents are in danger, who created those rents? The Dukes gave to the public—for a consideration—the grounds of their houses; by the growth of London the public have in return made them millionaires. But how can even the value of the property be affected by traffic passing freely through a gate when it is already free on both sides of it? The whole arrangement is completely obsolete and childish; and the sooner the Metropolitan Board move seriously, and, if it must be, angrily, in the direction of its unreserved abolition, the sooner will they deserve the public thanks for an act of the very simplest and most imperative duty.



\* As it has sometimes happened, however, in greater things, Cabby died in the arms of victory. The partial concession of the Duke is said to have been considerably expedited by a great outcry which arose about the death of a liberal-minded but perhaps apoplectically-inclined Jehu, who one warm day became so agitated in an altercation with the myrmidon of authority that a coroner's jury had an opportunity of sitting upon his remains and expressing their opinion upon Bumbledon.

### THE PARTHENON FRIEZE.\*

IT is easy work to attack piece by piece almost any theory relating to matters of antiquity, and the critic who is content to stop there is safe in his own stronghold. If, however, his ambition goes the length of a new and original theory, he must submit to be done by as he has done to others. But in a recent memoir on the Parthenon frieze we observe that its author, Mr. DAVIDSON, while unceremoniously indulging in censure of his predecessors, succeeds in placing himself beyond retort, inasmuch as the very original theory which he proposes is not, like the others, made up of many parts more or less subject to criticism, but consists only of one idea. It cannot be examined piece by piece. It must be taken or rejected as a whole. Fortunately there is little or no knowledge displayed in the support of it, and we need have no hesitation in rejecting as an absurdity the idea that the Parthenon frieze is a dream of PERIKLES artistically realised by PHEIDIAS. It is not only an absurdity, but it is ludicrous, from the airs of superiority in which its author indulges; and this superiority is the more unpleasant because it is directed against the two or three German professors to whom he appears to owe what he knows on the subject. Most of all is it directed against Professor PETERSEN, and yet it was from him that Mr. DAVIDSON might have learned most; for no writer on the Parthenon has, we venture to say, contributed anything like the amount of subtle artistic observation that we find in the "Kunst des Pheidias" (Berlin, 1873), and in subtle artistic observation lies the root of the whole question. Mr. DAVIDSON is evidently gifted with a quickness of apprehension not rare among his American countrymen, but that is a condition of mind the very last to which we would look for artistic appreciation, at all events when it comes to be a question of refinement; it is, at the same time, a condition of mind which renders piecemeal criticism often effective, or apparently so, and that is much the same thing in a temporary discussion.

We had supposed it to be now a settled belief that the Parthenon frieze represents two sides of a procession. The correspondence of the composition on the two long sides is in itself sufficient to suggest this; and when it has been once suggested we can see from a moderate study of ancient art that the sculptor who had to represent one continuous procession round the four sides of a temple could hardly have done otherwise than has been done on the Parthenon. If, then, the now generally accepted explanation of the frieze in this respect is in perfect harmony with what is known of the early traditions of artistic composition, it is obviously out of place for Mr. DAVIDSON to act as if he were ignorant of these circumstances, and to say "I do not understand this"; "I do not understand that." His words are (p. 42):—"We have now examined all the hypotheses [yes, but not the arguments] by means of which it is proposed to reduce the two processions to one. We may therefore confidently conclude that two processions are represented in the Parthenon frieze. This conclusion, from which there is no escape but by assuming that the artist was a stupid blunderer, is by itself sufficient to upset the whole Panathenaic theory." These are mild words compared with what he glibly rolls off elsewhere; as, for example, on p. 46:—"It is only fair, however, to say that PETERSEN out-Germans even the Germans in wild theorising. One could collect a delightful list of absurd doctrines from the work we have been quoting." He means the "Kunst des Pheidias," to which we have referred above. It is by far the best piece of criticism of ancient art that we know of. If Mr. DAVIDSON had had but a small share of PETERSEN'S caution, he would have been saved from his "dream of PERICLES." In PETERSEN we find extensive knowledge and the keenest artistic appreciation; in Mr. DAVIDSON a mere smattering of knowledge, a vague imagination, and the licence of expression which would naturally be expected in these circumstances.

One of the most interesting groups in the east frieze of the Parthenon is that which has usually been described as a priest receiving from a boy the new robe (*peplos*) for ATHENA POLIAS. In recent years it has several times been proposed to explain the action of the priest rather as that of giving a robe, carefully folded, to the boy. Mr. DAVIDSON approves this view of the subject so much as to say (p. 58): "The person who first made clear that the man is not receiving but delivering the garment was Dr. FLASCH, and this demonstration is the one thing that

\* "The Parthenon Frieze, and other Essays." By Thomas Davidson. London: Kegan Paul, Trench & Co. 1882.



redeems his pamphlet from utter worthlessness." We are then told how Dr. FLASCH proved his case, and that "one has only to look over all the acts of giving he can remember in products of Greek art to convince himself how true this is." No doubt. But it is not an instance of either giving or receiving alone. It is an instance in which the act of giving is represented at a moment when it is also an act of receiving, and the examples which Dr. FLASCH adduces are away from the point. Yet immediately beside this group he might have seen the priestess engaged in precisely the same stage of the act of receiving, and had he searched carefully he would have found at least one very striking analogy which is conclusive against his theory.

Close to this group are two girls who are just arriving, each carrying on her head a four-legged stool for the priest, and priestess beside him, to take their seats on. The priestess is already preparing to relieve the foremost of the girls of her burden. Upon this Mr. DAVIDSON remarks (p. 113): "Surely a chief priestess, officiating at a great public sacrifice, would not be obliged to set her own stool and that of her assistant. Imagine an English bishop setting stools for himself and his assistant curate!" This may be meant for American humour; but it is a kind of language which we venture to describe as true-born Philistinism. It flows on, page after page, about these weary stools—whether they have legs or not, and how many, or whether, in fact, they are not baskets after all, "since baskets with legs were by no means unknown in antiquity" (p. 120).

It remains now to notice the "dream of PERIKLES" itself (p. 78). One of the plans of the great Athenian was to have a gathering at Athens of Greeks from all parts of the world wherever they were settled, and to this end he arranged that various sets of deputies should be despatched to invite them. At this gathering arrangements were to be made for the restoration of the temples burnt down by the Persians, for the performance of sacrifices, and other matters. "The object of this mission was never realised, and the convention never took place. . . . It is the sacrifice for which this convention was to provide that is the subject of the Parthenon frieze." That is to say, PHEIDIAS was set to work to prepare and execute a design to illustrate an event which was still in the uncertainty of the future, much as if he had been an Austrian artist of our day commissioned to prepare designs to celebrate the approaching silver wedding of the Emperor. It is only in art that nothing is impossible! But why, we may well ask, was PHEIDIAS confined to the frieze? Or were the combats of Centaurs and Lapithæ also meant to illustrate the scenes that were to take place in Athens when the rude Greeks of the North met the soft Ionians? Was the contest of ATHENA with POSEIDON in the west pediment to show the assembled multitudes how the Athenian supremacy at sea was, after all, a thing they need not fear, since the cultivation of the vine was the greatest source of prosperity? And how was the birth of ATHENA from the head of her father ZEUS, in the east pediment, to be interpreted as appropriate to the occasion?

## SUBWAYS AND LONDON STREETS.

IN the growth of a city such as London the accruing evils of overcrowding its streets fail to attract the attention and consideration they deserve. To meet the increasing wants for shops, warehouses, and dwellings, additional height of the buildings is provided, but the main and indispensable arteries of communication by which their comfortable occupancy can alone be secured remains neglected. The several and fluctuating widths of the Poultry, Cheapside, Ludgate Hill, Fleet Street, and the Strand may have been sufficiently commodious to meet the wants of a London population fifty years ago, but the most careless passer-by of to-day must be conscious that the constantly-recurring and almost chronic "blocks" are not creditable to our modern local government's intelligence. The dangers of the streets are too well known and their painful records too conspicuous to afford any excuse for so persistently neglecting or disregarding their constant recurrence. During some hours of the day a walk from the Mansion House to Charing Cross will prove to the most sceptical observer that other than existing provisions must be made to control and render comfortable such a traffic as that which prevails between the limits we have named. The crowded pavements and the

no less over-burdened carriage-way proclaim the fact beyond doubt or cavil, that these lines of streets are incompetent to perform their proper functions, so as to secure safety to the crowds by which they are used.

Notwithstanding the inconveniences and dangers we have referred to, there is much indeed to be thankful for when we consider the onerous and complicated duties thrust upon the streets above and below their surfaces. Underneath, in positions and under such conditions which we had better not too minutely examine, there are innumerable pipes of earthenware, iron, and lead, all huddled in confusing entanglement. A more precise knowledge of what is below it is as well that the confiding householder should never attempt to gain. The telegraph wires, and in some localities the exhaust tubes used by the Post Office for the dispatch of light packages, are added to the long-accumulating deposits made by water and gas companies' pipes during many years. If, therefore, we feel, with good reasons, surprise at the confusion prevailing on the surface, we are the more astonished when an opportunity offers enabling us to examine the dangers lurking beneath. Danger, indeed, lurks there in no stinted form, as more than one unfortunate gas explosion has fully demonstrated.

Besides the danger from gas (seweral and illuminating), there are the decaying pipes, saturating from their state of leakiness the soil in which they are imbedded, and thus storing up magazines of future plague-germs and other disease and death dealing producers.

The three great necessities of life—water, light, and facile disposal of household wants—are secured in such a way as to reflect but little credit on our vaunted civilisation and sanitary knowledge. A fire or a gas explosion, or a congested sewer, soon displays the shortcomings and dangers of some of the most crowded London thoroughfares. Yet under the pressure of any unusual strain on the water or gas companies' supplies a break-down is too common, affording ample proof that London, with its boastful boards and vestries, is much behind in practical efficiency many a third-rate town in less favoured districts of the British Empire. Many causes now operate to prevent that unity and compactness of interests which under any circumstances is so essential to good and efficient local government; but perhaps the most dangerous and unmanageable ingredients in this question are the vested interests of the gas and water companies. These peculiarly-privileged bodies, endowed with great and almost plenary powers, acquired under the authority of special legislation, usurp in the most reckless manner powers which it was never contemplated they should be permitted to enjoy. The most aggressive acts are committed in furtherance of the aggrandising policy of these rapacious companies, who disregard all complaints, and seem to delight in the knowledge that the great population of London is helplessly enthralled in their binding fetters of monopoly. Rich and poor are alike subject to their rapacity, and no modern parallel can be found to compare with the existing state of gas and water supply in the greatest city of this or any other time. A persistent and well-considered extravagance in needless works enables these giant companies to maintain a defiant position, proof against public feeling or State interference.

Practically, under such circumstances the water and gas companies and their officials and workmen are lords paramount over the streets of London, interfering in their selfishness with any scheme of subways for the more safe and convenient reception of gas mains and water pipes. Early legislation will, we trust, change such a condition of things, and place in the hands of the public the gas, water, and other supplies, when no obstacle would then exist to alter the scheme of indiscriminate pipe-laying as now carried on regardless of the inconveniences and dangers it occasions.

With a perfect knowledge before us of the causes which impede traffic, there can be no question of the desirability of immediate recourse to ample and well-conceived subways for accommodating all apparatus required for the supply of water, gas, and other necessary wants. We have already some moderate examples of subways in several of the new streets constructed by the Metropolitan Board of Works; but by some unpardonable legislative hitch when that self-asserting body was being clothed in its powers, full as they were at the time considered, it was found that the great monopolies of water and gas production and supply could not be compelled to use them. The Metropolitan Board constructed sewers and sub-



ways, but "gas and water" clung to their legal powers, and insisted upon disturbing the traffic by a maintenance of the right to lay down and deal with their pipes on the surface as hitherto.

Can there be for one moment any doubt in an intelligent mind that to continue longer apathetic on this most vital question would be to court and encourage a danger becoming daily more imminent? If there was any immediate prospect of a check to the prosperity of London, and therefore some chance of reducing the numbers of its population, then there might be a shadow of excuse for neglecting a matter of such paramount importance as the sensible government and control of its streets and thoroughfares.

Subways for London, more especially in its densely-populated centres and busiest streets, need not be constructed in the exact line of traffic, but take the most convenient routes competent to meet the present and prospective wants of the districts they traverse. To construct a subway along the Strand would involve an outlay, measured not so much by the simple constructive character of the work itself, but by consequential damage to trade during progress of the works. In such direction also the dimensions of a subway would be limited to the narrow confines of such a thoroughfare, and quite inadequate to meet the wants of so crowded a district. A much more comprehensive scheme of subways must be contrived to meet not only existing wants, but provide against all coming improvements of whatever kind.

One great advantage which a substantial subway would secure would be a good and sound foundation on which to build a durable roadway. Of whatever materials carriage- and foot-ways are now composed, much of their inefficiency and costliness is due to the absence of a thoroughly reliable foundation. The constant reparation and relaying of London's busiest streets is consequent on the inability of the made ground or concrete to resist the shocks and concussions of the heavy quick traffic passing over it. A roadway well constructed and of the right sort of materials would not be so troublesome or costly to repair, for, owing to the permanent character of the walls of the subway, the wearing or surface parts only would require renewal from time to time.

A well-devised scheme of substantial subways would be a costly matter no doubt, but they would reduce much expense and inconvenience which is under existing circumstances unavoidable. It would obviate the necessity of opening up a street and stopping its traffic to make repairs to or relay a gas or water pipe, while it would also secure ready access to sewer pipes, and control with greater efficiency their dangers and shortcomings. In cases of fire there would be perhaps the greatest advantage secured, for while having at ready and instant command a supply of water, all the troublesome and confusing crowding consequent upon fires would not interfere with the firemen's duties. It would be desirable, of course, to inaugurate with a good system of subways a competent staff of men to regulate and keep under intelligent control all matters connected therewith, as well as to manage the necessary repairs and examinations. In all weathers the pipes and their contents in the subway would remain proof against the fluctuating influences of heat and cold, securing during extremes of temperature a reliable dependence on the various supplies which they are designed to distribute.

Such a subway scheme would indeed be a leviathan undertaking, but there can be no doubt that it would eventually pay, not only in a financial sense, but in an increased safety from many now almost uncontrollable dangers. To estimate fairly the saving which subways would secure, all and every outlay at present incurred by gas and water companies, vestries, and other authorities, in repairs and changes of pipes and roadways must be taken into account. A check would be given to the monstrous expedients of the privileged companies to keep their income under by senseless works, so as to hold at arm's length all Government interference. Many a thousand pounds are thus squandered in needless repairs, so as to give an appearance of vigilant attention to the public wants, and at the same time secure for some favoured pavior a goodly income in making the necessary reparations to disjointed pavements and dislocated roadways.

But, alas! on reflection such a scheme as that which we have briefly outlined may be regarded under existing circumstances as the dream of a visionary, for there exists no authority competent to carry it out. The "City" fathers, the Metropolitan Board fashionables, and the vestries and

suburban authorities, must be first welded into a homogeneous mass of efficiency before any such dream can be realised. The City and Metropolitan Board notables cannot be too soon restrained in their vagaries, so as to save the Thames from eventual *enshoalment* and the low-lying lands and houses on its banks from perennial flooding.

### MR. BURGES' ADVICE TO A YOUNG ARCHITECT.

THE following characteristic letter was prepared by the late Mr. William Burges at the desire of a young architect who consulted him about the worthiest course to follow in the study and practice of architecture:—

MY DEAR SIR,—I venture to submit the following considerations to your notice:—

You have passed your apprenticeship, done your Academy, and finished the usual Continental tour, and the question now arises as to what you are going to do.

If you follow the usual course, you would take an office, hunt up work, and do the same, according to your lights, consoling yourself that many other architects would do it much worse.

Of course there are various sorts of practice, all of which are open to you, and you might become simply a house doctor, or a warehouse architect, or a light-and-air man, or an architectural policeman (*i.e.*, a district surveyor), or a general practitioner; and it is quite possible to make *money* by any of these, the amount depending on the extent of the practice, and that again upon the number of friends, besides the amount of the importunity and impudence by which work may be solicited.

But reflect; are any of these men artists? It is true that when they die they may have made money, but what else will they leave to the world beside that? Their names are simply written in water.

Now, it is quite open to you to take to all or any of these lines of practice, to make money, to bring up a family, to become churchwarden, and, above all, to be pronounced "warm" when you leave this world.

My object in writing these lines is to suggest to you that there is another course open by which you may perhaps be the means of leaving some beautiful things to posterity, and by which your name may possibly survive after you have quitted this life.

The question then arises, Why not try to be an artist, an accomplished man, a creator of works of art, and an ornament to your profession?

You have not the excuse that many have for not making the attempt, as I understand you are in a great measure independent of your profession.

Why not use that advantage to be something more than an idler on the one hand or a money-grubber on the other?

Try at least for a couple of years. They will not be lost years, even should you eventually not take up the artistic branch of your profession; for you will to a certain degree have educated yourself in the attempt, and you will be so much the better.

Supposing you decide to try, let us see where you are. You know something of modern construction, enough to enable you to practise without letting your buildings fall. You can draw well, and in an architectural and geometrical manner; but I know nothing of your perspectives, and your free-hand drawing is woolly, and wants precision. Above all, you are very defective in the human figure. (You have, I presume, a fair knowledge of the history of architecture.)

Now, I should recommend you to employ your next two years in three principal things:

1. The drawing of the human figure. This is really the foundation of all good taste. I don't mean that you should spend weeks in frizzling up a figure in chalk, for you are not going to be a painter, but that you should learn to draw correctly and know the bones and muscles which go to make up the outline, and, in fact, to be able to account for everything you see.

2. A serious course of reading of the best and most well-known authors. This also will conduce to form your taste. Philosophy and science will not help you so much as works of the imagination. Bohn's Library furnishes fair translations of the best writers at 5s. per volume; but if the work is a translation it is desirable to get two or more versions and to compare them together. In the



classics I should recommend Homer, Aristophanes, Æschylus, Herodotus, Xenophon, Virgil, Horace, Apuleius. Of the moderns, Dante, Chaucer, Shakespeare, "Faust," "Robinson Crusoe," "Undine," and Lane's translation of the "Arabian Nights." Of course I could mention many more, but these are sufficient for the present.

3. To carefully study and draw various beautiful things; and whether the said thing be a piece of jewellery or a piece of iron-work, or a building or portion of a building—to do it thoroughly, to find out its construction and why this and that is done, the basis of the ornamentation, the particular form of the curves, and never to leave it until you know all about it. The result will be that the next time you see a similar thing you will know all about it, and won't want to study it again. Do everything by common-sense; don't make a drawing when you can make a rubbing, and regard all your drawing in the light of evidence which is worth next to nothing if it is not authentic.

I consider you very lucky that you have such an opportunity of having your "learning time" over again, and I am quite sure that if you make up your mind to be industrious, your two years spent in the way I have ventured to suggest will be very happy as well as very useful ones.

Hoping you are not bored by the above,

I remain, yours truly,

W. BURGESS.

### THE PROPOSED PUBLIC OFFICES.

IN *The Architect* of last week Mr. John Taylor's evidence before the Committee of the House of Commons on the Public Offices Site Bill was published. We now give the evidence of Sir H. A. Hunt upon the value of the proposed site:—

*Mr. Wyatt*: I will just put the usual question to you as a matter of fact; have you read the recitals in the preamble to this Bill?—Yes.

Do you believe them to be true?—Yes.

*Mr. Wyatt* stated that this was all the evidence he proposed to produce for the preamble.

*Chairman*: You are Consulting Surveyor to the Office of Works?—Yes.

I need hardly ask whether you have been in that position for a great number of years?—A great number.

And you have made a valuation for the Government of the site proposed to be taken under this Bill?—Yes.

Will you give to the Committee the detail of that valuation?—This (*producing a plan*) is a copy of the deposited plan; and the part tinted with a pink colour is the part proposed to be taken compulsorily. It comprises Spring Gardens and five houses in Charing Cross. The total cost of acquiring that will be 458,185*l.*, and I have divided it in the following manner: the value of the property belonging to the Crown, now in the occupation of the Admiralty (many of these houses in Spring Gardens are in the occupation of the Admiralty), is 160,380*l.*; there are other houses in Spring Gardens in the occupation of various Government officials, including the Master Gunner's house, of which the value is 49,940*l.*; and there are other houses, the property of the Crown, in the occupation of private persons or let on leases, of which the value is 82,865*l.*; those three sums make a total of 293,185*l.* Then the value of the property belonging to private persons, and of the leasehold interests in the property belonging to the Crown, is 165,000*l.*, and that added to the 293,185*l.*, gives you the amount I have stated, namely, 458,185*l.* That is the cost of acquiring the property not in the possession at the present time of the Government; I understand the Admiralty and the First Lord's house and the Paymaster-General's Office to be in the possession of the Government.

458,000*l.*, therefore, represents the total sum which would have to be paid by the Government for the property which they propose to acquire under this Bill?—Yes.

And of that 293,000*l.* would be paid to the Crown, and 165,000*l.* to private persons?—That is so.

That does not include the value of the property which belongs to the Government, independently of the Crown, namely, the site of the present Admiralty?—It does not.

Does it include the two houses which it is proposed under the notices for this Bill to take, opposite to Drummond's Bank?—Yes, two houses.

And it includes the five houses fronting Whitehall, next to Biddulph's Bank, which are private houses?—Yes.

And various other leasehold interests in Spring Gardens?—Yes, it includes all that.

*Mr. Macfarlane*: It is an estimate of the value, not an arrangement made?—It is not an arrangement; it is an estimate.

*Chairman*: Under the clauses of this Bill it is proposed, is it not, to pay that 293,000*l.* to the Crown by an annuity spread over a term of years?—I do not know anything about that.

However, the clause speaks for itself?—Yes.

But practically it is a mere transfer from one Government department to another?—I suppose so.

And the sum outgoing to private individuals would be 165,000*l.*?—Yes.

*Mr. Gerard Noel*: Does that 485,000*l.* which you have told us is the cost of the land you propose to purchase include more than that which is marked yellow and green on this map (*pointing to a map*)?—Yes.

*Chairman*: It includes the whole that is marked blue and pink, with the exception of the property in the actual occupation of the Admiralty?—Yes.

*Mr. Gerard Noel*: Does it take Cocks' bank?—No; it goes up to Cocks' bank; it does not include Cocks' bank.

*Chairman*: Will you now explain to the Committee what is the value of the property which will be set free by this operation?—I have made an estimate of the property which will be set free when these two departments are erected; and the first property is the present War Office in Pall Mall, which I estimate to be worth 250,000*l.*; and then the Army Medical Board in Whitehall Yard, which, taking 600*l.* at twenty years' purchase, is worth 12,000*l.* That I call Crown property.

Is that property upon which the Government now pays rent to the Crown?—No, they do not pay rent for this: there are a few leases upon this property in Pall Mall, but they are for very short terms and very small rents.

It is not fully rated?—No, not near.

But the Government does pay rent?—To some extent, but not much. What I mean is that when the War Office is moved into the new building the Government or the Crown will have set free for sale or for building purposes the property in Pall Mall, which is represented by 250,000*l.*

Although the Government, as distinct from the Crown, does not pay full value now in the shape of rent to the Crown?—Nothing like it.

But it does pay some rent?—A small rent comparatively; I do not know what it is.

When set free by the operation of this Bill, that property in Pall Mall and Whitehall Yard will realise the value of 262,000*l.*?—Yes.

Then there is further property belonging to the Government, which you call Consolidated Fund property?—Yes; Winchester House, in St. James's Square, 45,000*l.*; Adair House, 49,700*l.*

You have valued the freehold of Adair House; it is only leased, but for the purposes of this calculation you must take the value of the fee simple?—You must take the rental at what it would be fairly capitalised at as representing what you would be saving. Then there is No. 35 Great George Street, Westminster, a house occupied by the War Department, 5,600*l.* Then I must take a sum for the value of the houses occupied by the Admiralty in Spring Gardens, because we shall not have to pay that; that is 160,380*l.*

That appears on the other side of the account?—Yes, that appears on the other side of the account, which means, in point of fact, that the total sum which would be realised either by the Crown or by the Consolidated Fund would be 522,680*l.*

As compared with an outlay of 458,000*l.*?—Yes; that is, of course, putting down nothing in respect of the Admiralty and the First Lord's house.

The effect of the operation of the Bill will be very beneficial as regards the Crown property, at all events?—It will be beneficial in a financial point of view, if you look at the Crown property as part of the property of the Government; it is out of one pocket into the other, in point of fact.

At all events, during the life of Her Majesty the Government will receive the rent of that?—Yes.

*Mr. Rylands*: Winchester House you estimated at what?—45,000*l.*

What did you give for it?—45,000*l.*

And you estimate it at the same amount?—Yes.

*Mr. Arthur Arnold*: What about Adair House; how do you arrive at the figures you gave?—By taking twenty years' purchase upon the rental we pay for it.

Was not Adair House purchased by the Government?—No; the Treasury would not buy it, and we have rented it.

*Chairman*: I think, when the Select Committee, the Report of which is before this Committee, was considering this question, you gave evidence in favour of the Great George Street site?—I did.

Would you lay before the Committee a comparison of the cost of the present scheme with that of the Great George Street scheme?—Yes.

By your scheme before that Committee it was proposed to take the whole of the property between Parliament Street, Great George Street, and St. James's Park?—Yes.

And upon that site you proposed that the War Office and the Admiralty should be erected?—Yes.

And a further building for the Council Office?—Yes.

As compared with the present site, that site gives a rather larger area for building purposes, does it not?—Yes.

What is the difference?—The site with which we are now dealing has an area of 237,000 feet; the Great George Street site to be



acquired was 288,000 feet, and the cost of it was estimated at 1,300,000*l.* Now, to make a fair comparison, I made an estimate of the whole cost, including that which I have already given you, and the probable value of the Admiralty premises, the First Lord's residence, and the Paymaster-General's office, so as to make a comparison between the two. If you could sell the Admiralty, if it were vacant land, the total cost of the site would be 927,000*l.*, as against 1,300,000*l.* in the Great George Street site.

For the purposes of comparison, you have valued the property which is in the possession of the Government, and occupied by the Admiralty?—Yes, and the Paymaster-General's office.

And putting a value upon that, you have then compared that with what we should have had to pay for the compulsory purchase of the rent of the Great George Street site?—Yes.

And the difference is, in round numbers, as between 1,300,000*l.* and 900,000*l.*, a difference of 400,000*l.*?—Yes.

But looking at it in perhaps a more practical manner, namely, what the money out of pocket to the Government would be, in the one case the Government would have to pay 165,000*l.* to private individuals, and in the other case something over 1,000,000*l.*?—Yes; but still, in making a comparison, you must look at it all as property, whether we use it for this purpose, or whether we sell it. And then that estimate of 522,000*l.* which I gave you as to property being set free, would apply to both schemes alike, and, in addition, the value of the Admiralty site in regard to the Great George Street site.

Of the Great George Street property a portion has already been bought by the Government?—Yes.

How much is that valued at?—Bought and paid for, 241,681*l.*

That is property mainly fronting Parliament Street and King Street?—And Charles Street, and some houses in Great George Street.

Of course one advantage of that scheme would be the widening of Parliament Street?—Yes.

Now, supposing the present scheme were adopted by Government, would it, in your opinion, still be possible to widen Parliament Street irrespective of the present plan?—Yes; I think the cost of the property that we have acquired, and the cost of the property to be acquired, would be recouped to any speculator, or to the Metropolitan Board of Works, by the vacant land which would be set free after the street had been widened.

Therefore, although the Government may adopt this present plan for rebuilding the Admiralty and the War Office, we need not abandon the idea of the widening of Parliament Street?—No.

That would be a metropolitan improvement, and might be carried out by the Metropolitan Board or any body authorised for the purpose, and, according to the figures, that still may be done without any loss to the Government or the public?—Yes; and the Government would then get back, of course, the 241,000*l.* which they have already paid on account of some buildings which they from time to time have acquired.

*Mr. Rylands*: What is the state of the ground so acquired; is it now covered by buildings in private occupation?—You mean Great George Street site? Partly; the only vacant ground there is is the ground in Charles Street, opposite the India Office.

*Mr. Arthur Arnold*: With regard to Clause 4, it is there provided that "the Commissioners shall pay all costs and expenses incurred by her Majesty or by the Commissioners of Woods in relation to the valuation of the said lands or the purchase-money under this Act"; could you give me now any estimate of what those costs will be?—I cannot indeed. It is an ordinary thing that the purchaser under compulsory Acts has to pay the vendor's expenses, and they depend entirely upon the litigation that may arise, and a variety of circumstances; but it will not be very much.

Did you value the Great George Street site?—Yes.

Does your memory supply you with the cost of the valuation in that case?—I got nothing for it; it was included in my salary.

Will this valuation be included in your salary?—As far as this valuation is concerned, it will be included in my salary also; I shall have nothing to do with the purchasing of the property.

*Chairman*: Since the report of the Committee of 1877 you are aware that Messrs. Drummond have rebuilt their bank?—Yes.

And that Messrs. Cocks & Biddulph have rebuilt theirs also?—Yes.

And do you know that both of those firms offered the land to the Government before building them?—I am under that impression, but I never saw any correspondence.

Under those circumstances should you consider that the Government was under a moral obligation not to take, under compulsion, their property?—I certainly should.

*Mr. Gerard Noel*: And did Messrs. Cocks & Biddulph apply to the Government?—I was under the impression that Messrs. Cocks & Biddulph applied to the Government before they erected their present new buildings.

On this plan of yours there is only space to erect the War Office and Admiralty?—Yes.

No space to offer to the Board of Trade, for instance, or to the Offices of Woods and Works, as there was, I think, on the Great George Street site?—No, it was never intended to put the Office

of Works upon the great George Street site, or any other buildings except the Council Office.

According to your Great George Street plan, the Office of Works was housed, was it not?—Not in the Great George Street site.

But in your plan it was?—Yes.

*Mr. Rylands*: In the estimate you gave us just now, comparing your Great George Street site with the one now proposed, as regards your estimate I understand that it only included the War Office and the Admiralty?—The Great George Street site? It included space for the Council Office also.

And that was all?—That was all.

*Chairman*: Can you compare the building area, not the ground, but what I may call the building area of your Great George Street plan, with that of the present one?—(The witness made a calculation.) The building area in my Great George Street site was 128,500 feet.

And the present plan provides 59,000 square feet for the War Office, 52,800 square feet for the Admiralty, and, I think, 9,000 square feet for that building in Spring Gardens, deducting 10 feet for widening the area—it is 150 by 60, which is 9,000 square feet—and that figure added to the others will give 8,000 feet difference between the two areas?—Yes.

*Mr. Arthur Arnold*: I presume that you are in no way responsible for the recommendation of the method in which the consideration is payable to Her Majesty?—None whatever.

*Mr. Gerard Noel*: Is what is called the Paymaster's Office included in the proposed new War Office?—No.

I think you said, in your evidence in 1877, that you required 62,000 feet for the War Office, allowing for the growth of the War Office; is 59,000 feet enough as now proposed?—I am not responsible for that figure.

## EXPLORATIONS AT EPHEBUS.

A MEETING was held at the Mansion House on Monday for the purpose of aiding in the resumption of the excavations on the site of the Temple of Diana at Ephesus. The Lord Mayor presided, and in opening the proceedings said the famous Temple of Diana at Ephesus, one of the seven wonders of the ancient world, had been hidden from view for many centuries, and its exact site was unknown, when in 1869 Mr. J. T. Wood, after six years of search, found its remains more than 20 feet below the present level. The trustees of the British Museum, who had supplied the means to explore some of the public buildings at Ephesus, then authorised the exploration of the ruins of the temple, and five years were devoted to the work, with the aid of Government grants to the amount of 12,000*l.* In 1874 very important excavations at Babylon and Nineveh were being carried on by the English Government, and the trustees resolved to suspend the work at Ephesus, as they thought it inexpedient at the time to apply to Government for fresh grants for the purpose. Mr. Wood had from year to year applied for a grant to continue and complete the explorations at the temple, but the times had been unfortunate for such enterprises, and there was little or no chance of further Government aid. An influential committee, under the patronage of the Duke of Albany and the presidency of Mr. Beresford-Hope, M.P., had been formed to resume the explorations by the aid of a public subscription, and it was in support of that object that that meeting was convened.

Professor Hayter-Lewis read letters expressing sympathy with the movement from the Prince of Wales, the Dukes of Connaught and Albany, the Primate, Cardinal Manning, Lord Shaftesbury, Canon Farrar, and others, including Sir F. Leighton, the president of the Royal Academy, who said that few discoveries had been of greater interest to the world of art and archaeology than those at Ephesus, and it would be a grievous thing if this country, possessing, as it did, the site of the Temple of Diana, should not continue the excavations, which had already produced so valuable a harvest.

Mr. J. T. Wood explained what had been already accomplished under his direction. In 1863 he began to dig in Ephesus. He was unsuccessful until 1869, when, having found an inscription in the great theatre which gave him a clue to its whereabouts, he managed to discover the building itself some distance to the north-eastward of the Coressian, or north of the Magnesian Gate. He had by means of grants from the British Museum, and by drawing on his private purse as far as was practicable, excavated a considerable portion of the temple, but funds having run short—and no more being apparently forthcoming—all further labour in that direction had to be abandoned. This was deeply to be regretted, as there could be no doubt from the indications he had noticed that, besides the great interest attaching to the famous Temple of Diana, a large number of most beautiful friezes were to be obtained from it. The sum required to complete the excavations was only about 4,500*l.* or 5,000*l.*

Professor Newton, Professor Donaldson, Mr. Pullan, and Professor Roger Smith addressed the meeting, and the following resolution was unanimously carried:—"That the complete excava-



tion of the Temple of Diana at Ephesus is an object well worthy of support from the nation, which now possesses in the British Museum the only portions of the beautiful sculptures discovered of the temple; and that a subscription list be at once opened." The proceedings terminated with a vote of thanks to the Lord Mayor.

### THE "OWEN JONES" PRIZES.

A COMPETITION was instituted in 1878 by the Council of the Society of Arts, as trustees of the sum of 400*l.* presented to them by the Owen Jones Memorial Committee, being the balance of the subscriptions to that fund, upon trust to expend the interest thereof in prizes to "students of the Schools of Art who, in annual competition, produce the best designs for household furniture, carpets, wall-papers and hangings, damask, chintzes, &c., regulated by the principles laid down by Owen Jones." The prizes are awarded on the results of the annual competition of the Science and Art Department. Six prizes were offered for competition in the present year, each prize consisting of a bound copy of Owen Jones's "Principles of Design," and a bronze medal.

The following is a list of the successful candidates:—1. Thomas E. Doran, School of Art, Macclesfield, design for silk hangings. 2. James Meine, School of Art, Kidderminster, design for an Axminster carpet. 3. Thomas Linnell, School of Art, Leicester, design for tapestry hangings. 4. Alexander Park, School of Art, Glasgow, design for a carpet. 5. John Sykes, School of Art, Leicester, design for a wall-paper. 6. Frank E. Adams, School of Art, Macclesfield, design for furniture silk.

### SOME IRISH ARCHÆOLOGISTS.

A NEW and very cheap edition of the Life of Father Mathew, by the late Mr. J. F. Maguire, M.P., has been published by Messrs. Burns and Oates. It contains many sketches of notable characters who lived in Ireland thirty or forty years ago. Among them is the Rev. Matthew Horgan, who had a reputation in Munster for his freaks in archæology. Having been puzzled by the builders of past ages who erected round towers, of which the use is inexplicable, he resolved to puzzle posterity by erecting one on a new plan, and if the effect of it on his contemporaries may be accepted as evidence, there could be little doubt of his success.

Father Mat, whose name was known to every Irish scholar, was, says Mr. Maguire, as homely in his appearance as he was simple and kindly in his manner. Innocent as a child in the ways and wiles of the world, he was also as credulous in his guileless vanity. He regarded himself as the highest authority on all questions appertaining to the science of agriculture, and, without disparagement of any other man, he held himself to be possessed of a more thorough and comprehensive knowledge of the principles of architecture, sacred as well as secular, ancient as well as modern, than any architect of any age or country. He was as conversant with the Cyclopean as with the Greek and Roman styles—with the fire-pillars of the Persians as with the cavern temples of the Egyptians. From various styles he derived a new order of his own which might be termed Horganian. Father Mat was not content with being a theorist; he was a practical propagandist as well. As ready to superintend the erection of a cathedral as the building of a school-house, he was ever on the look-out for the opportunity of undertaking one of those great works, through which the name and fame of the erudite and accomplished pastor of Blarney were to be transmitted to future ages. I cannot pretend to say how many are the now existing proofs of the architectural genius of Father Mat; but there is still extant a church which he was permitted to adorn externally by the addition of an excrescence, partly of the nature of a tower and partly of a spire, which has scarcely its equal in the world for elaborate incongruity and perplexing novelty. It is one of those marvellous works which bewilder the mind. Of this sublime effort of his inventive genius Father Mat would speak with intense enthusiasm; but it was on another work—his Round Tower—that he proudly rested his claim to the imperishable gratitude of posterity. This was his darling work, the very apple of his eye. The enraptured tourist may behold it as the train passes the village of Blarney. This rival of the fire-pillars of the Persians was partly erected with his own hands; for Father Mat would lay aside the eloquent pen with which he had encountered Vallancey, Petrie, or O'Brien, in refutation or in defence of some hated or cherished theory respecting the origin and use of the Round Towers of Ireland, in order to don the apron and assume the trowel of a mason. As this grotesque structure rose, course above course, so did Father Mat's exultation swell in proportion. This monster of stone and mortar was his child—the offspring alike of his reverence and his enthusiasm—which was to refute false theories, convince the sceptic, and confound the scoffer. This "celestial index" was to endure for ages, as the most splendid evidence of the antiquarian faith and erudition of the priest of Blarney. It has been irreverently but not inaptly described, no doubt by people without faith, as "an architectural churn;" and really if the great

people with whom Gulliver was made acquainted in his travels could have seen it, they might possibly have appropriated it to the humble use which the name implies. The shallowest impostor could wind Father Mat round his little finger were he to speak of the Horganian Spire of Queenstown or the Round Tower of Blarney with becoming admiration.

Surrounding the erudite parish priest of Blarney was a group of zealous antiquaries, who devoted many a leisure hour to pleasant excursions—to the exploration and inspection of ruined abbeys, Danish forts, round towers, cairns, Ogham inscriptions, and matters of similar interest. Their more serious labours were diversified by social intercourse of the most agreeable kind, in which were drawn forth the convivial talents and harmless peculiarities of the learned brotherhood.

Amongst them was Windele, the author of more than one work of merit, and one of the safest authorities on all subjects connected with the laws, customs, literature, and history of ancient Ireland.

Then there was Keleher, the librarian of the Cork Library, whose chief interest in antiquities lay in the amusement which the enthusiasm of his friends afforded him, and the opportunities for ridicule, and fun, and practical joke, of which their discoveries and speculations were the constant occasion. The crypt of the "fort," which the other members of this society approached with interest and penetrated with awe, was, according to him, an abandoned fox-hole; those mysterious writings on slabs or blocks of stone, through which Father Mat, or Windele, or other illustrious pundits, read the epitaph of a hero or a bard, or the record of some striking event in the annals of a royal race, were, with the irreverent librarian, nothing more wonderful than milk-scores; and those upright stones of great size, which were pronounced to have been "Druidical Phalli" by the most famous Celtic scholars of the day, were, in the esteem of the unbelieving Keleher, conveniences considerably erected for the gratification of cattle—in other words, "cow-scratchers," as he elegantly designated them.

But there was one member of the body whose good nature, gaiety, and child-like simplicity rendered him the delight of his learned brethren. This was Abraham Abel, a Quaker of literary tastes and antiquarian tendencies. Abraham was far advanced in years, but as lively and agile as a boy. His neat dapper little figure, and his vivacious temperament, gave one the idea of a mercurial gentleman of thirty; but Abraham had approached his sixtieth year. In the matchless simplicity and the marvellous credulity of this guileless human being, his waggish associates possessed a never-failing source of enjoyment. The wonderful discoveries to which Abraham stood godfather would, if proved authentic, have upset the theories and speculations of all the great writers on Irish antiquities; but such discoveries were invariably the result of some well-laid plan of his friends to whom his exultation at these fortunate elucidations of long-existing causes of perplexity was a delicious treat, of which they never tired.

Abraham Abel once received a valentine written in Ogham (*oum*) characters, at which his wonder was very great. He immediately brought the prize to his friend the librarian, for the benefit of his translation of characters which, to the object of the epistle, were a profound mystery. "My dear William," said Abraham, in a whistling voice, and wagging his little chin, on which grew a small-pointed beard, "I never received a valentine before in all my life. And is it not most strange that the first should be written in Ogham!" The document was gravely investigated by the librarian, while his little friend stood by in a fever of expectation. "You are a happy man, Abel," began the learned decipherer; and thereupon he favoured him with a free translation of the valentine, which disclosed a burning, long-concealed, and unrequited passion, expressed in language of so intense a character as to suffuse the face of the venerable bachelor with blushes, and even make him question his identity. "Dear me, dear me! Poor creature, poor creature!" was the sole commentary of the commiserating Abel; but it was almost enough to give the translator an attack of apoplexy, from his efforts to control his laughter; for, of course, the precious document was the result of a deliberate conspiracy. It might be added that the translator knew as much of Ogham as he did of Sanscrit.

For a time Abraham stoutly maintained the theory that at an early period of the world man went on all-fours; and on one occasion he displayed remarkable agility in illustrating his theory by practical experiment. A field near Blarney was the scene of this illustrated lecture on the antediluvian mode of human progression.

Father Mat died on March 1, 1849, in the seventy-third year of his age, and the forty-sixth of his ministry, thirty-four of which he devoted to the duties of parish priest of Blarney and Whitechurch. At his death a sum of *three shillings* was found after him, as his sole earthly possession. It was his wish to be buried in his beloved Round Tower, and he left elaborate directions for this ceremonial; but the wish was disregarded.

**Lower Sherringham.**—The memorial-stones of a Primitive Methodist chapel at Lower Sherringham have lately been laid. The cost of the work, including land, &c., will be over 700*l.* The architect is Mr. Baker, of Yarmouth; the contractor for the work being Mr. Robert Bertram, of Aylsham.



## NOTES AND COMMENTS.

ON Monday, in the House of Commons, Lord ELCHO inquired about the conditions of the competition for the proposed War Office and Admiralty. The first Commissioner of Works informed his lordship that he had not yet decided what form the competition for the new buildings should take. Some of the best architects declined to compete if it were an open competition, on the ground of the great expense of preparing designs. He was told, however, that it would be possible to adopt a plan of having a double competition; first, sketch designs, and then a selection of five or six of the best for the complete design. The matter has not yet been decided.

MR. SHAW LEFEVRE also said that it was anticipated that the New Courts of Justice would be ready on the first day of next term. He was unable to say with assurance that the courts at Westminster would be removed; but there was a certain obligation to the public that the old courts should be pulled down, so that the exterior of Westminster Hall might be seen. What the general effect would be was at present a matter of doubt. Mr. SHAW LEFEVRE believed Sir CHARLES BARRY was of opinion that the general architectural effect would not be altogether satisfactory, and that he had contemplated another wing of the Houses of Parliament; but in regard to this no decision had been arrived at.

ON Monday last, Sir ARTHUR HOBHOUSE, Q.C., the arbitrator under the Epping Forest Acts, signed his final award. During the four years which the case has occupied he has made over 700 orders. Of the total acreage of the forest ascertained by the Commissioners in 1877—over 6,000 acres—5,531 acres have been purchased by the Corporation and are dedicated to the public; while about 532 acres remain enclosed, partly under conditions preventing building, and thus tending to enhance the value of the forest as an open space. The aggregate purchase-money paid for the 5,531 acres now public property is 189,012*l.* In addition, 21,892*l.* have been spent in extinguishing rights of lopping trees, with a view to prevent the disfigurement of the forest, and the hereditary Lord Warden of the forest has received 300*l.* as compensation for the extinguishment of his office. A sum of 8,000*l.* has been paid by the Corporation to secure the addition to the forest of the woods, ponds, and heronry of old Wanstead Park. Some 2,000*l.* has been spent in printing the notes of proceedings during the arbitration, and, perhaps most interesting item of all, 33,489 was disbursed by the Corporation in fighting the suit which established the illegality of the enclosures in the forest, and in protecting the public interests before the Epping Forest Commission, which sat from 1871 to 1877. The grand total of expense thus reached is 256,275*l.*

A FEW days ago, M. BARTHOLDI, the designer of the colossal statue of *Liberty Enlightening the World*—which is to be erected near New York in commemoration of the American War of Independence—entertained a party of his friends at luncheon. The table was laid in the lower folds of the drapery of the figure. MM. GAGET, GAUTHIER & Co., of Paris, the contractors for the erection of the statue, have been obliged to take a plot of ground adjoining their foundry, and covering 3,000 square metres, upon which the scaffolding has been fixed. The interior of the statue contains an iron backing, to which are attached the exterior parts, consisting of bronze plates, about  $\frac{1}{10}$  inch thick by 4 feet  $7\frac{1}{2}$  square—the largest size made in the trade. The plates are kept together by rivets that are invisible from the outside. The plates of bronze are made to correspond with the contours of the model in an ingenious way. A skeleton of fine wickerwork was first formed, and this was covered with a thick coat of plaster moulded to an exact reproduction of the original. Upon the plaster 6-inch templates of thin wood are adjusted, and are then given to the bronze-workers for models. The weight of the figure will be about 150 tons; the height from head to foot about 110 feet; and from the end of the torch raised in the right hand to the feet, 140 feet. The cost of execution will exceed 28,000*l.*, and the work will require five years for completion.

THE French Archæological Society for the Study and Preservation of Historic Monuments will hold its forty-ninth session at Avignon. The congress will open at 3 P.M. on Saturday, September 26, in the Hôtel de Ville of that town, and will terminate its sittings on October 1.

THE members of the jury appointed in connection with the Exhibition of Plans and Models of School Buildings at the Trocadéro have decided to award no prizes in the first four classes into which the exhibits are divided, but only honourable mentions. The classes include plans and models of lycées, normal schools, upper primary schools, professional and technical schools, city schools, and training colleges for teachers. This decision is based upon the conviction of the jurors that the merit of the exhibits does not by any means come up to what might have been expected under the circumstances.

THE King of Italy has signed a decree for the creation of a gallery of modern art at Rome. The new collection will be arranged in the Michael Angelo cloisters at the Diocletian Baths, and is to be opened during the month of October next. A sum of 4,000*l.* will be introduced each year in the public budget for the purchase of works by contemporary artists.

M. FLOQUET, the Prefect of the Seine, has drawn up a scheme by which associations of workmen will be admitted to compete for public works in Paris. The workmen's delegates have maintained that if the Administration would consent to make regular fortnightly or monthly payments on account, they would undertake to leave as a guarantee until completion a deposit of from 20 to 30 per cent. on each of these payments. The Administration has agreed to this arrangement, but exacts other guarantees and conditions on the part of the men:—1. The creation of a special fund in aid of those of the associated workmen who may fall ill or be wounded in the execution of the work, and for the widows and children of the deceased partners. 2. The establishment of an arbitration board of three members charged to regulate all disputes between the men, without prejudice to the authority conferred by the regulations upon the official architects and engineers. 3. The nomination of one or more syndics, furnished with full legal powers to act on behalf of the association and with certificates of capacity and good conduct; these syndics will draw up the tenders, and, in case of their being accepted, will superintend their execution as clerks of the works, under the supervision of the architects and engineers. In case of the scheme being adopted, a committee of eight members of the Municipal Council will be appointed by that body to decide on the occasion of each public adjudication, as to whether or no the workmen's associations shall be admitted to compete. It is probable that M. FLOQUET's scheme, of which the above is an abstract, will be almost unanimously approved by the Council.

THE Guardians of the Bromsgrove Union are in a difficulty with regard to the designs for the new Infirmary. The Local Government Board did not approve of the plans, which were drawn by Mr. C. A. EDGE, the architect. Accordingly he prepared a second set, which the Guardians decline to submit for the approval of the authorities. Mr. EDGE properly stands on his rights, and says that he could not submit to be thrown over in the manner contemplated by some of the Guardians. If his new plans are inadmissible, he is willing to go into the matter *de novo*, as he is confident that he can ultimately satisfy both the Guardians and the Local Government Board. At the meeting on Wednesday it was contended, on the one hand, that Mr. EDGE had not fulfilled his contract with the Guardians, as he undertook to get his plan approved by the Local Government Board, and had not done so; and, on the other hand, that, according to the terms of the advertisement, Mr. EDGE was the architect for the building, his plans having been accepted by the Guardians, and his commission of 5 per cent. on the outlay would have to be paid if any other architect were employed. It was at length decided to postpone the further discussion of the subject for a month, when the Guardians may be disposed to act wisely and fairly.

THREE months ago the Administrative Commission of Fine Arts delegated four of its members to report upon the present condition of the decorative works of art in the Municipal Buildings of Paris. After a careful examination, it has been discovered that the magnificent frescoes by RESTOUT, on the dome of the grand staircase at the HENRI IV. Lycée, require immediate restoration. Other mural decorations are also mentioned as standing in need of attention, and the consent of the Municipal Council for the carrying out of the necessary work will be at once demanded.









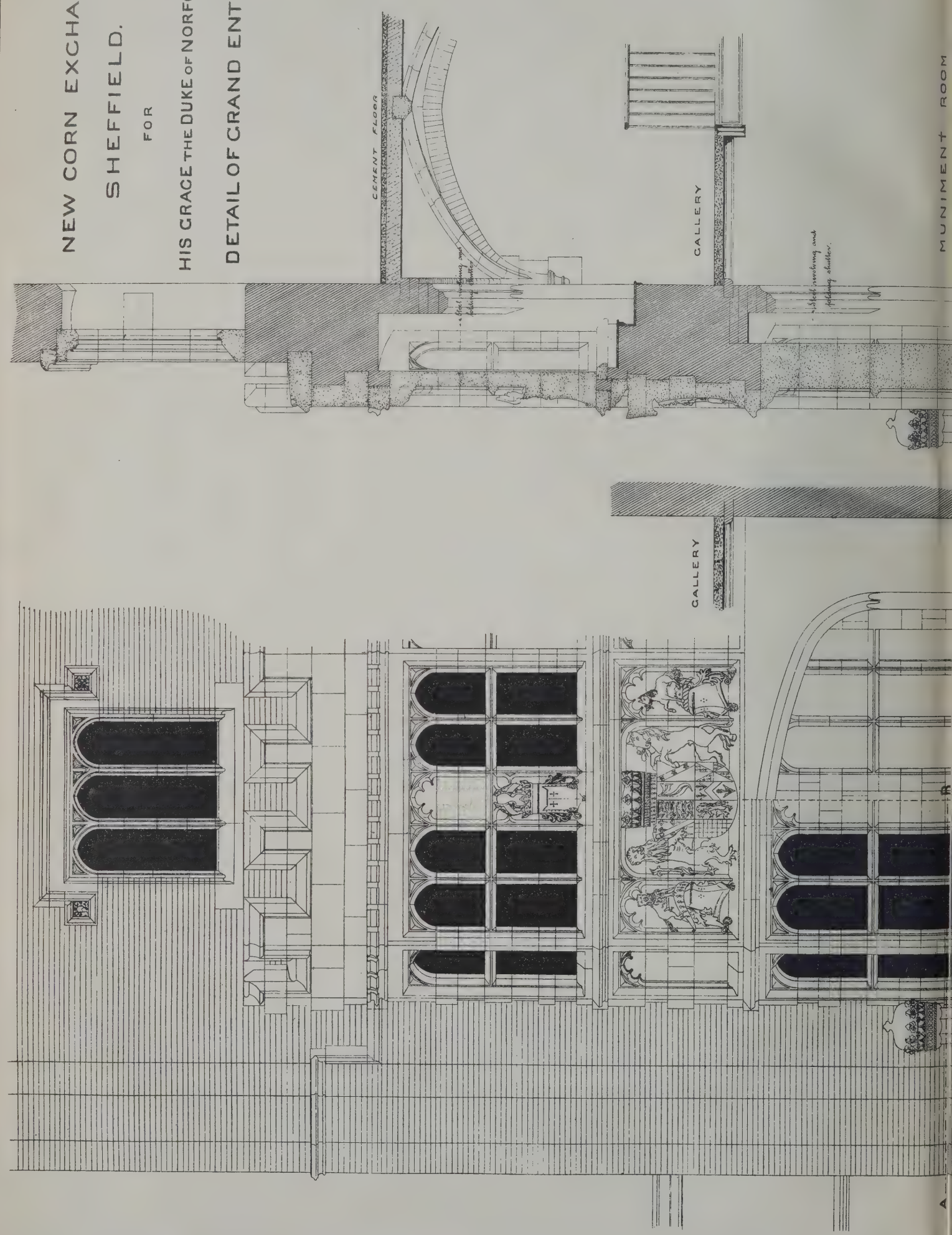
THE NEW CORN EXCHANGE BUILDINGS. SHEFFIELD.  
ERECTED FOR H.S. GRACE THE DUKE OF NORFOLK, E.M.  
DESIGNED BY J. H. STUBBS, ESQ., ARCHT.





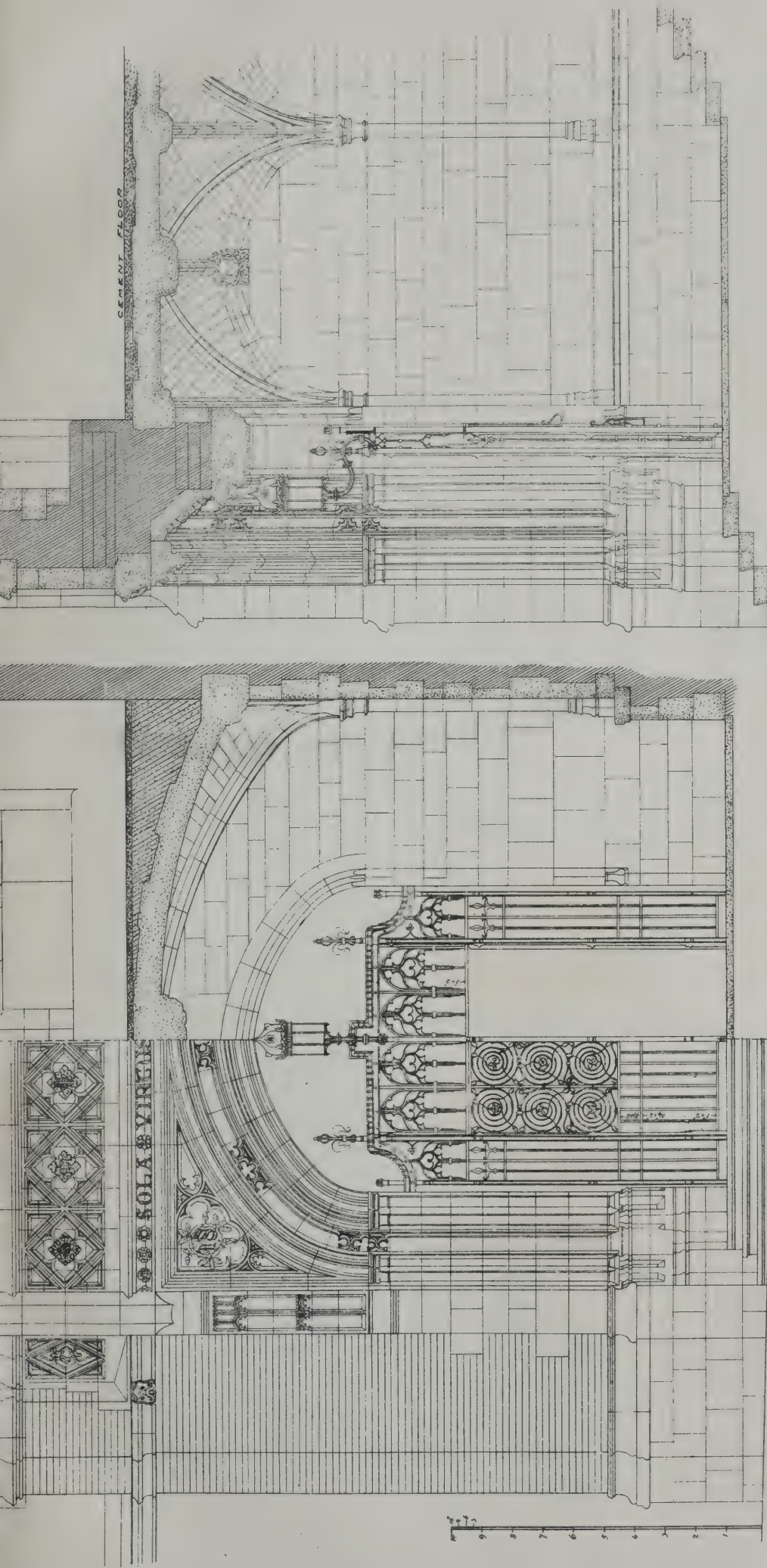


NEW CORN EXCHANGE  
SHEFFIELD.  
FOR  
HIS GRACE THE DUKE OF NORFOLK, E.M.  
DETAIL OF GRAND ENTRANCE.



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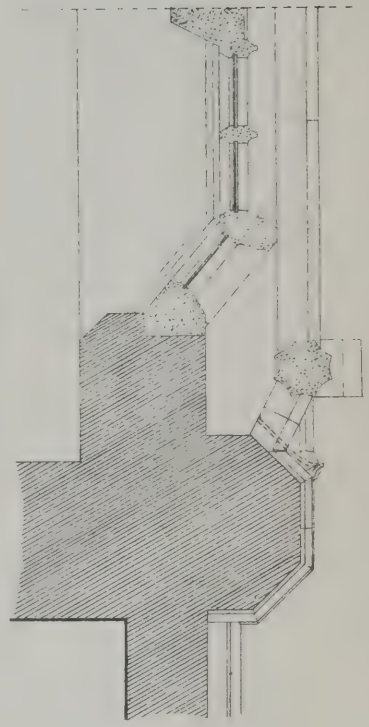




LONG SECTION.

HALF SECTION.

ELEVATION.



PLAN AT A-B.

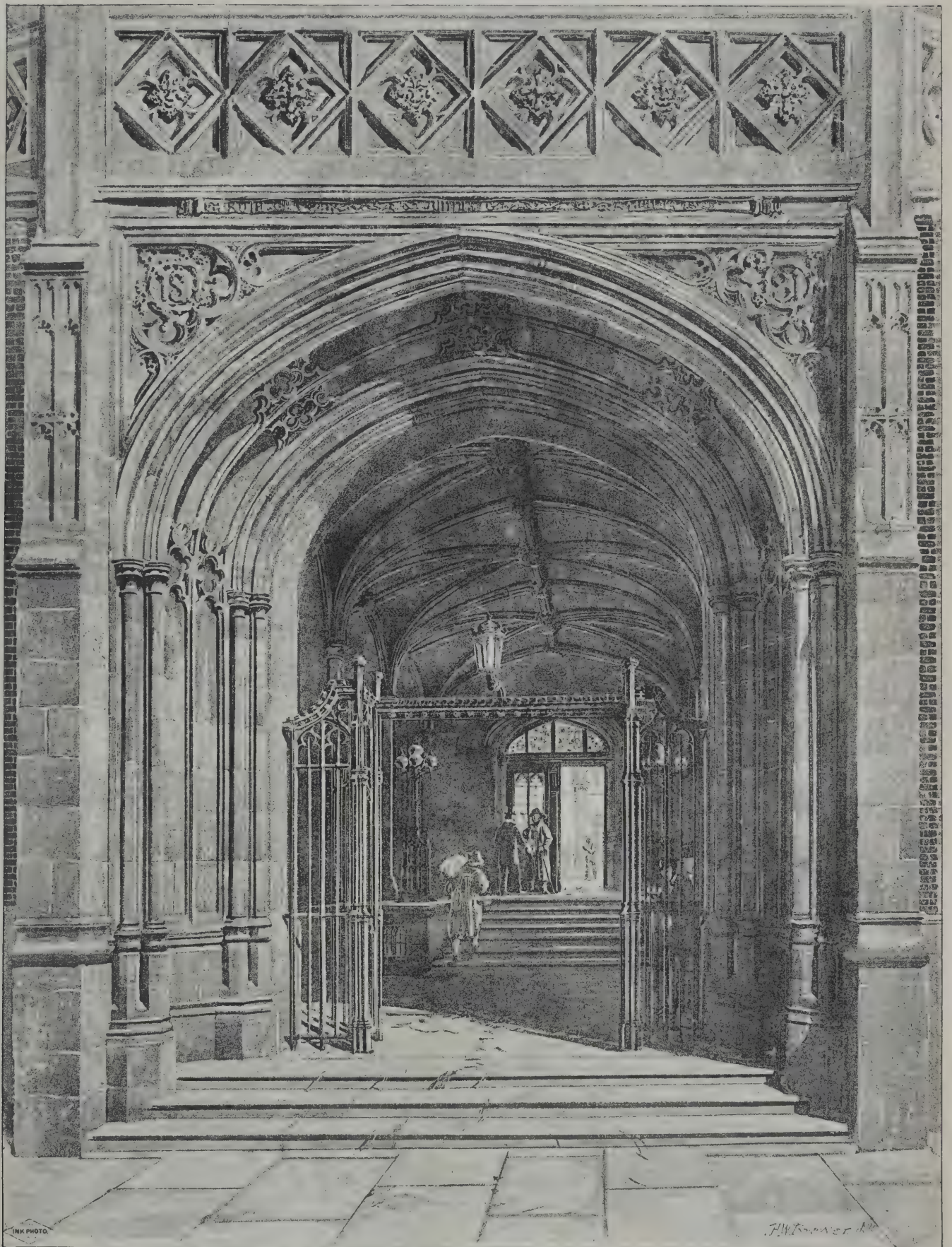
HALF PLAN THRO. GATEWAY.

*Architectural drawing of a half section of a wall with a large archway and a smaller archway below it. The drawing is a half section of a wall with a large archway and a smaller archway below it. The drawing is a half section of a wall with a large archway and a smaller archway below it.*









INTERIOR OF GREAT CENTRAL ENTRANCE OF NEW CORN EXCHANGE, SHEFFIELD.

MESS<sup>RS</sup> M.E. HADFIELD & SON, ARCH<sup>T</sup>S

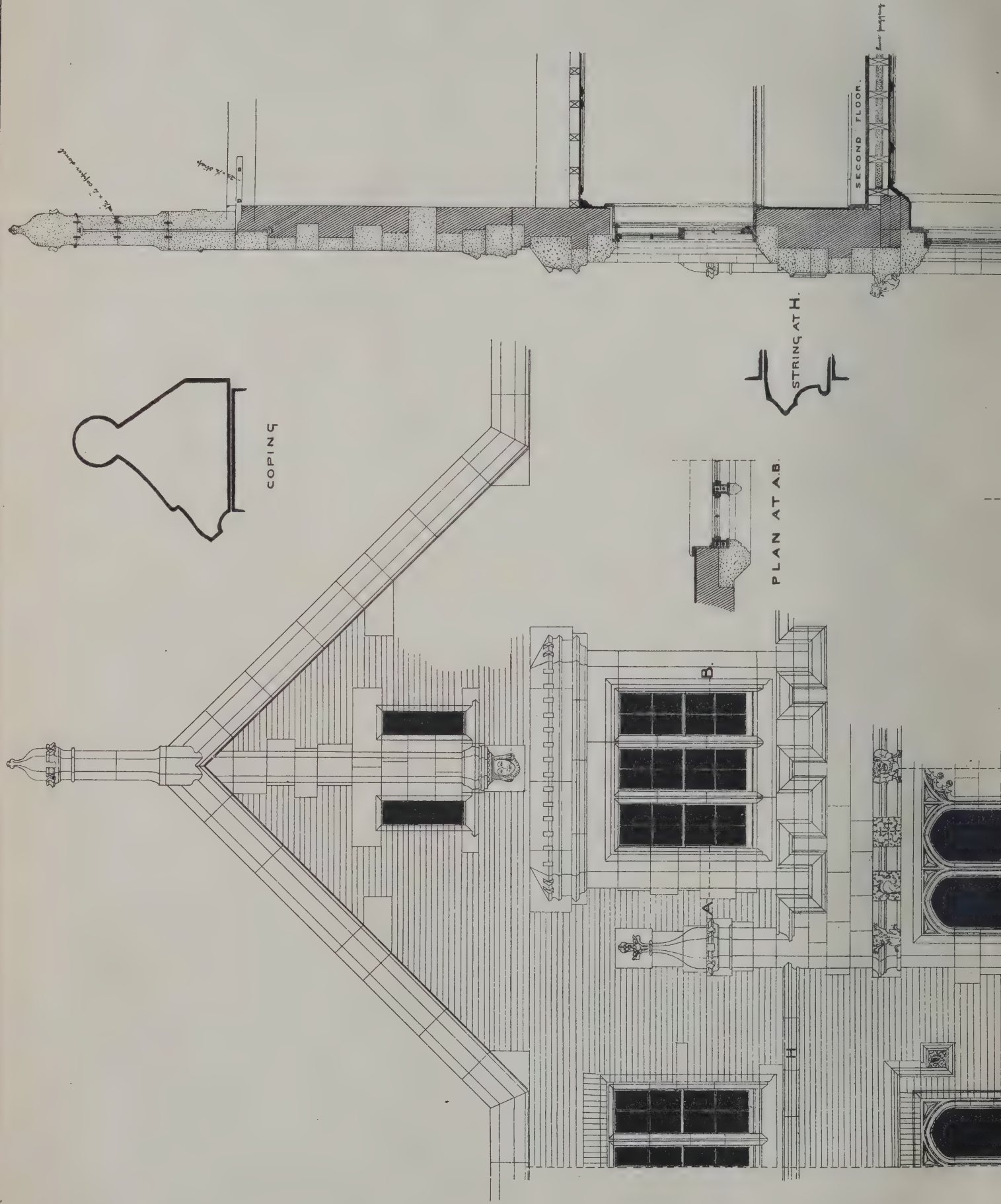




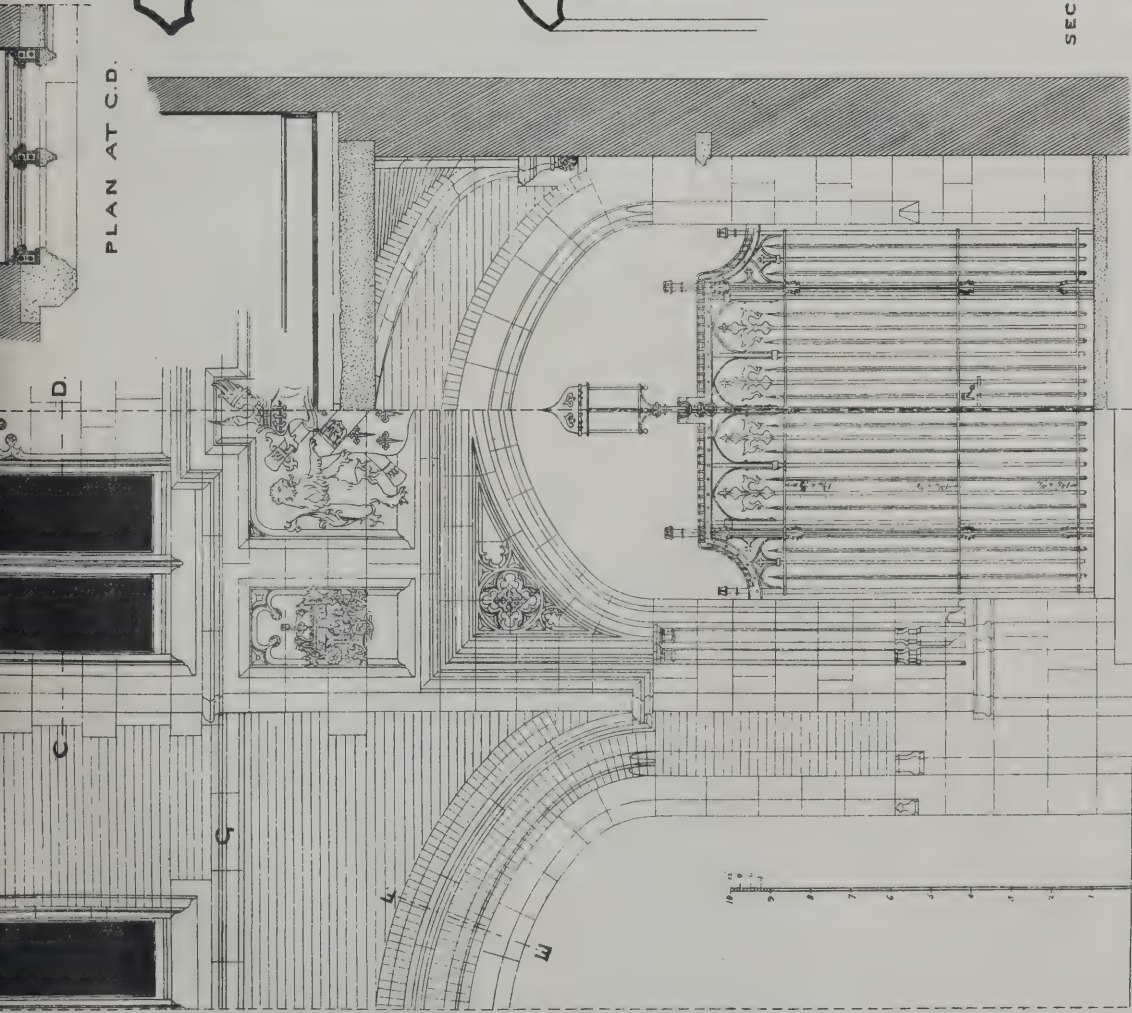












PLAN AT C.D.

STRING AT G.

FIRST FLOOR

GLAZED BRICKS.

SECTION THRO' ARCH AT E.E.

ELEVATION. HALF CROSS SECTION.

SECTION.

NEW CORN EXCHANGE

SHEFFIELD.

FOR HIS GRACE THE DUKE OF NORFOLK E.M.

DETAIL OF SOUTH ENTRANCE.

PLAN.

*1/2" = 1' 0"*  
*1/4" = 1' 0"*







## ILLUSTRATIONS.

THE NEW CORN EXCHANGE, SHEFFIELD.

THE building, which we illustrate this week, was commenced in July 1878, and completed early in the present year, and takes the place of the old building where the business of the Duke of NORFOLK's Sheffield estates and the corn market was carried on, and which occupied a portion of the site of the new wholesale covered fruit and vegetable markets.

The new structure comprises a central hall for the use of the corn factors, 150 feet long and 75 feet wide, and 35 feet high. The roof is entirely of oak, in five spans or sections, supported by stone pillars having axed granite pedestals, and supporting arched principals. This arrangement has been adopted to secure the steady north light so necessary for the corn dealers, and, in addition to the skylights, there are five three-light windows in the eastern gables. The desks or stands for the factors are pitch pine of convenient design, and there is space for one hundred and twenty. The floor is of narrow pitch pine boards 2 inches in thickness, and the hall is well warmed and ventilated. There are four entrances groined in stone and brick, and the settling-rooms, lavatories, &c., are arranged on the eastern side.

The principal façade of the building, which occupies the site of the old hay market, is 225 feet long, and the lateral elevations are each 135 feet long. We give an illustration of the principal entrance gateway from a water-colour drawing by Mr. BREWER exhibited at the Royal Academy last year, and with it careful detailed working drawings of this portion of the building, and also of the southern gateway, furnished by the architects to further illustrate their design. These gateways have hammered iron gates, those to the main entrance having had especial care bestowed on their design, and the "badges of the noble house of NORFOLK, the sprig of oak leaf and acorn, and the dog rose, worked into the scrolls of the upper panels. In the string-course above is the famous motto, "Sola virtus invicta," and the date 1881 is cleverly worked in the spandrels below. The oriel above, of two stages, lights the large muniment-room, which occupies the space above, and is groined in stone and entirely fireproof. The great shield of arms of the Duke of NORFOLK, quartering the Duchess, is displayed in the upper portion with the three crests borne by the Duke—HOWARD at the top, and DE BROTHERTON and FITZALAN at the sides.

We give a plan of the first floor, from which it will be seen that a first-class family and commercial hotel occupies the northern front. There are thirty-two bedrooms, spacious restaurant, billiard and smoking rooms, and private sitting-rooms, and complete offices occupying the basement, with extensive cellarage.

Along the west and south fronts are spacious sale-shops with mezzanine floors and basement kitchen to each, the DENNETT & INGLE system of arched flooring being used throughout. There is a fine range of extensive cellarage to let off under the large hall, with cart entrances. The first floor of the south wing, including the tower, in which, over the main entrance, is a fireproof muniment-room, is occupied by the offices of the Duke of NORFOLK's Sheffield estate. These are spacious and carefully-planned, all the joiners' work, floors and fittings being of excellent wainscot oakwork. The ceilings are of delicate ribbed plaster, panelled, carefully studied after old local and South Yorkshire patterns. There are also several suites of offices to let off, those on the main front to north of tower being occupied by the architects, Messrs. HADFIELD & SON, while the extensive range above the estate offices on the second floor are let to the Nunnery Colliery Co., Limited.

A feature of interest has been arranged in the large Corn Exchange Hall by the introduction, on the roof corbels, of the arms with supporters of the Lords of Sheffield. They are twenty in number, commencing with JOHN TALBOT, first Earl of Shrewsbury, quartering his wife, MAUD NEVIL, Lady Furnival, heiress of Hallamshire, and finishing with his Grace the Most Noble HENRY, the present and fifteenth Duke of NORFOLK, and his amiable Duchess, FLORA, daughter of CHARLES FREDERICK ABNEY HASTINGS, Baron Donington, Howard, and Hastings, the well-known maunche, which same quartering occurs on the shield of GEORGE TALBOT, the fourth Earl of Shrewsbury, who married the Lady ANNE, daughter of WILLIAM, Lord Hastings, an ancestor of the Duchess. It has been the Duke's desire to identify her Grace with himself throughout the erection of this

building, and excellent portrait-heads of both are carved as label terminations in the main inner entrance doorway.

The general design, as shown in our illustration, taken from Mr. BREWER's fine water-colour drawing, is of the Tudor type, of the Cardinal WOLSEY tradition, and local influences and traditions have been carefully studied throughout the work, the materials being thin red bricks, with stone facings from a quarry on the estate near Rotherham, of a durable texture and warm colour; the same stone, in fact, as wrought at the parish church at Rotherham. The high price of labour at the time the buildings were projected induced reticence in the use of stone dressings. The roofs are covered with brindled Broseley tiles. The lead bell-turret with clock-dial, over the central gateway, has not been carried out, the design not having been approved for the present. We may also observe that the front entrance gates, as executed, are shown on the scale drawing.

Messrs. HADFIELD & SON, the architects, have given daily supervision to this extensive work during its progress, having had the advantage of offices within a stone's throw; and their drawings and intentions have been very efficiently and ably carried out by the contractors, Messrs. JOHN TOMLINSON & SONS, of Leeds and Sheffield. Mr. R. W. PAYNE was clerk of works.

The drainage and sanitary arrangements have had careful consideration at the hands of the architects, and the heating and ventilation have been satisfactorily executed by Mr. W. W. PHIPSON, C.E. The excellent stone and wood carving has been carried out by Mr. McCULLOCH, of Kennington Road.

Messrs. HARDMAN & Co. have been entrusted with the wrought-iron gates and other ornamental iron and brass work.

The quantities were taken out by Mr. D. J. BROWN, F.S.I., of Lincoln's Inn.

The cost of the whole building will be about 55,000*l*.

## A SAXON FORTIFICATION.

THE members of the Norfolk and Norwich Archæological Society visited a part of West Norfolk last week, including Narford, Westacre, Southacre, and Castleacre. At Castleacre a paper was read by the Rev. C. R. Manning on the remains of the castle and other works, to which a Roman origin is sometimes ascribed. He said:—

The one great point which was overlooked by, and indeed unknown to, our older antiquaries, is that a vast series of earthworks, or rather castle mounds and base courts with inclosing banks, were erected during the four centuries preceding the Norman Conquest by the settlers from the Northern and other continental nations, whom we call the "Saxons," but who are in fact the English, our own forefathers. From the middle of the seventh century to the Norman Conquest this country was everywhere peopled by our race, the British inhabitants being absorbed or driven westward to Wales and Cornwall. Almost every town and village still retains the names of the families who came over and settled here. They were not, like the Britons, a tribal settlement of people living in common on the defence in hill-tops; nor like the Romans, a military garrison in camps and tasteful villas, the product of a more Southern civilisation; but they had much of the institutions of municipal and family life—they were domestic and home-loving like ourselves, their descendants. They lived on their farms and among their cattle, and their lords and chieftains dwelt in fortified castles built of earth and wood. We know that these castles consisted of a great earthen mound or motte or burh, on the top of which was not a stone castle, but a wooden one, with a bridge thrown over the ditch, and with several inclosed courtyards or baileys for the houses of dependents and for cattle. It is particularly to be remembered that the square stone castle came in with the Normans, and that they did not erect mounds. Their ancestors in Normandy, who were the same (or allied) "Northmen" as the Saxon settlers here, did so, and there are many castles there still exactly corresponding to ours here; but at the time of the Conquest they had learned to build in stone, and relied on stone castles for habitation and defence; and these they could not have built on freshly-erected mounds, as the foundation would not have been secure. Wherever we find a great mound, whether or not there are remains of later stone castles upon them, with horseshoe or oval or rectangular earthworks adjoining, we now know that these are the work of the Northern and German settlers before the Norman Conquest. The evidence for this is clear and unimpeachable. Mr. Clark's valuable papers in the *Archæological Journal*, xxiv. 100, will convince the most sceptical; and I have gathered together much of the proofs he has brought forward in a paper on the Castle at Eye, Suffolk, published by the Suffolk Institute of Archæology. The Saxon Chronicle gives us numerous instances of the throwing up of these mounds for defence and habitation. The earliest is



Bamborough, made by Ina in 547, who also constructed one at Taunton, destroyed by Queen Ethelburga in 722. Another was erected at Bourn by Merca, the Saxon lord, part of which remains. King Edward, in 913, threw up such mounds at Hertford and Witham, in 920 at Maldon, in 922 at Stamford, and in 924 at Bakewell. Inferior dwellings were sufficiently protected by wooden stockades and paling, together with the natural defences of wood and water. But the chief lord, the holder of a great lordship or honour, had his "aula," his hall and fortified residence on such a mound as we see here, with its adjoining enclosures protected by strong banks. The plan of these is nearly always much the same. The mound is placed not within a bank, but upon one end of it, so that the banks die into it, and itself forms a part of the bank at that point, and the comparison of many plans helps to prove the common origin and date of such works. There is one at Mileham, not far off, which was the seat of an "honour"; and last year we had the pleasure, in our excursion to Denton, of ascertaining that the earthworks at Darrow Wood there were no other than the remains of a small Saxon castle. In further proof of their age, I may quote a contemporary account, furnished by M. de Caumont in his lectures on military architecture, written about the end of the eleventh century (*Art Journal*, xxiv. 101). A certain Colmin, Archdeacon of Jerouane, says:—"The rich and powerful first secure a strong place for their personal safety and the keeping of their prisoners and their wealth. They commonly throw up a mound of earth, surrounded with a deep ditch, upon the inner edge of which they establish a stout palisade of squared timber, strongly bound together, equal for defence to a wall, and strengthened by turrets or towers. Upon the centre of the mound is placed the residence, only to be approached by a steep bridge across the ditch." This description is illustrated by the Bayeux tapestry, upon which is represented the taking of Dinan. Here is seen the conical hill, surmounted by a timber building, which two men are attempting to set on fire, whilst others are ascending the mound by the steep bridge, reaching nearly to a gateway at its summit.

There can be no question that the earthworks here are not of Norman date, but Saxon, and that the Norman castle of stone was built on the already fortified site. Mr. Harrod was acute enough to see this plainly, but from not having the knowledge of the present day as to the Saxon method of fortification he did not attribute them to the mound builders of that age, and put them further back to the British or pre-historic period. A point of great interest that arises here is this. We see a somewhat rectangular bank, of very large extent, enclosing ten acres, and a great part of the present village of Castleacre, the main street running through it. It starts from the mound at the northern corner, and runs nearly west for about 800 feet, turns a right angle, and runs south for 900 feet, and then with another angle runs due east until it meets the horseshoe base court south of the mound. From the extent and somewhat square form of this work Mr. Harrod decided that it was Roman, and he was fortunate enough to strengthen his views by the discovery of some Roman pottery when digging into the bank; but this was in the circular work, the mound, where he supposed the fourth side of the Roman camp to have stood. There are, no doubt, instances in the country of Roman camps having been thus utilised in Saxon and Norman times, and Mr. Clark mentions Castleacre as one, probably not having visited it, and relying on Mr. Harrod's account. But I venture, with all diffidence, to think that there is really no sound reason for regarding any of the work here as Roman. The square form on the western side proves nothing, as that shape might of course at any time be used, and the south bank clearly runs at an angle into the horseshoe work, which is certainly Saxon. Roman coins and pottery in a bank rather help to show that the bank is later, as that would not be their original place of deposit. Roman banks were much lower than these, and intended to carry high walls. The height of the bank is, I think, a strong argument against their Roman origin. So extensive a work as this, too, if it were Roman, would, I think, be capable of identification with some named station, or would have retained a nomenclature such as "Caistor," which could not be mistaken. There is no reason why the Saxon lord, whose name in the Confessor's time appears to have been Toche or Toka, who held several other manors in this district, should not have required so large a yard for his cattle, &c. In fact, it was the great size and importance of this Saxon fortress that led Earl Warenne, after the Conquest, to make it the seat of his "honour," and to give it precedence over his 139 other manors in Norfolk. I do not wish to assert too positively that no portion of these earthworks can be Roman, but I certainly do not think they are; and if Mr. Harrod were alive, and had the advantages of later information, I believe that he would have admitted his error. Of the subsequent history of this castle I do not propose to speak, except to remind you now that we are on the spot of its rather brief period of grandeur and importance after the Conquest. It was granted by William the Conqueror to William de Warenne. Whether it was the seat of an "honour" before the Conquest I have no means of ascertaining; but I very little doubt but that it was, like Mileham (and Horstead?) and Eye. The first De Warenne married Gundreda, supposed to have been the daughter of the Conqueror,

who died here, and whose fine tomb is at Lewes, in Sussex. Edward I. visited here several times, the last time in 1297. It continued in the De Warennes till 1347, when, at the death of John, the last of the family, it devolved on the Earl of Arundel. It was already in ruins, and has long ceased to possess any architectural features. A few ivy-clad rubble walls remain to attest the situation of the noble stone castle of the Norman owners, while the older and more lasting earthworks of the Saxons have again become the most prominent objects in the scene, however invaded and encroached upon by the farmyard and shop and cottage of modern days.

### ANCIENT SOUTHAMPTON.

THE members of the North Hants Archæological Society visited Southampton last week. At a meeting in the Hartley Institution an address was delivered by Mr. T. W. Shore on the history of the town. He said that there was evidence to show that Bevois Hill and the district of St. Mary's were Roman burial-places, or places where Roman outlying settlements existed, and in Saxon times they had proof that the site of the town was situated near St. Mary's Church, and it was probable that the ancient Saxon church was dedicated to St. Nicholas, and occupied a position somewhat east of the present St. Mary's Church. St. Nicholas was the patron saint of sailors, and Leland in 1646 saw the remains of this small church standing. No doubt St. Mary's district was the site of the ancient "Hampton." The position and limits of the ancient "Hampton" were clearly settled by the walls. Portions of these walls remained in different parts of the town, on the western shore, and elsewhere. These were about  $1\frac{1}{4}$  mile long, and were built in successive times. Originally there was not a wall, but a fosse, and it was a stockaded town. Winchester was walled before Southampton, as in 1148 there was an order to the effect that the castle was to be walled and an enclosure built. The walls round the town did not appear to have been completed for a century or so later. The ancient Bargate was of two dates, the central arch being early Norman date, and the flanks of the time of Richard II. Their ancestors, like themselves now, were in the habit of locking the stable door after the horse had been stolen, for after the terrible destruction Southampton suffered in the time of Edward III. it was necessary to reconstruct the town, and it was interesting to know that the walls were built of Purbeck stone and Isle of Wight limestone. The length of the wall was  $1\frac{1}{4}$  mile, and Leland says there were eight gates, and of these five entrances remained. There was Bargate, the gate of God's House, Water Gate, West Gate, and Blue Anchor Gate, and it was possible that between Blue Anchor Gate and West Gate there was an entrance from the West Quay to the town. The castle was probably built in early Norman or Saxon times. The fortress was referred to in the dispute between the Empress and King Stephen as one to be delivered up to Henry Plantagenet on the death of King Stephen, and Henry de Blois, Bishop of Winchester, and brother of King Stephen, was required to give security for the carrying out of the contract. The castle was now approached by two ways—one from High Street, and the other through a series of unpicturesque alleys from the bottom of West Quay, and accordingly the ancient road leading to the castle could be followed. On the West Quay was a singular example of fortification—a Norman wall behind the arcade. There may have existed along the Quay some Norman houses, and more than one eminent antiquarian thought the arches one of the earliest examples of domestic architecture in the country. In one of the houses an ancient kitchen was found, but the date was not certain; but after the invasion of the French this reputed House of the Kings was looted. The French came to the town in 1338, and held a position for a day and night, but the next day they were driven out by an army raised from the neighbouring county. The French invaded the town on another occasion, unexpectedly, while the people were at mass, and filled their ships with booty, and went away with the ebb tide to Dieppe, where they divided the spoil. The King's House suffered more particularly than others less distinguished, and probably the arches he had alluded to were constructed to give the King's House on the Western Shore a better means of defence. Blue Anchor Lane he took to be an ancient roadway leading from this palace. Passing through the lane they would come to St. Michael's Square, the most ancient part of the town, and which was the ancient "Fish Chepe." In this part was also a portion of a woollen hall. When there was plenty of passing between England and France, Southampton was Norman French, and it was believed that seven hundred years ago Henry II. kept his yacht there. The speaker having alluded to the old building at the bottom of High Street, proceeded to speak of the hospital of God's House, the chapel being dedicated to St. Julian, who was the patron saint of travellers, boatmen, and ferrymen, for whose use it was intended. In addition to God's House they had a hospital, which received various gifts from different townsmen, such as rent left by one, and provisions out of his estate by another, and in the days of the Reformation they amounted to 140*l.* a year, a considerable sum in those days. Queen Philippa persuaded Edward III. to give the grants to Queen's Hall, Oxford, now called Queen's College, and



such had been the increase in the value since, that it was estimated, when the quit rents fell in, the estate of God's House would, in the course of the next forty years, amount to 40,000*l.* In the days of the Reformation Protestant refugees came to Southampton, and Queen Elizabeth gave them the ancient church of St. Julian, and to this day services have been held there in the French language. The hospital itself was now a kind of almshouse, under the management of a warden. Allusion was made to the great abbeys, monasteries, and chantries that formerly were in the neighbourhood, and the privilege of having a fair at Chapel. They had the remains of some distinguished churches, St. Michael's being of various dates, a portion being Early Norman, and some said Saxon. Holy Rood was an ancient church belonging to the Priory of St. Denys. St. Lawrence was a new church, but on an old foundation. All Saints' Church was an ancient church, and probably called All Hallows, but it was rebuilt a century ago. It contained now an interesting series of vaults. Formerly two large pictures of giants, of the date of Charles I., were outside the Bargate, but there was nothing remarkable about them except that they perpetuated a legend of the Saxon times.

## THE INSTITUTE OF ARCHITECTS AND THE OFFICE OF WORKS.

THE following correspondence has passed between the Office of Works and the Council of the Institute of British Architects:—

I.

H.M. Office of Works, July 7, 1882.

Sir,—I am directed by the First Commissioner of her Majesty's Works, &c., to acknowledge the receipt of your letter of the 4th inst., enclosing a copy of a letter which the Institute of British Architects have written to the Metropolitan Board of Works upon the subject of the Hyde Park Corner Improvement, and also enclosing another plan for dealing with the subject.

In reply, the First Commissioner directs me to say that he is surprised that the Institute should, after their interview with him, and without informing him of their intention, have sent a deputation to the Metropolitan Board of Works upon this subject, with the object of inducing that Board to withdraw from the promise which they had given to the Government to contribute the sum of 20,000*l.* to the scheme proposed by her Majesty's Government, and for which her Majesty's Government are responsible.

I am to remind you that it was stated by the deputation which was received at this office on the 27th ult., that the plan which they presented was not approved by the Council of the Institute as a whole; and after the explanation which the First Commissioner gave, pointing out objections to their plan, he was under the belief that the majority of the deputation recognised that its adoption was not expedient. I am also to advert to the expression which the President of the Institute is reported in the papers to have used to the Metropolitan Board with reference to the statue of the Duke of Wellington, to the effect that the present Duke of Wellington and the public would be under apprehension lest the statue should go to the foundry, and I am to remind you that nothing was said by the First Commissioner to your deputation which could justify any such apprehension. He is also surprised to perceive that in their communication to the Metropolitan Board they should have stated that the plan of the Office of Works does nothing to relieve the block of traffic at the junction of Piccadilly and Hamilton Place, when he had distinctly pointed out to the deputation that it was already his intention to widen Piccadilly at this point.

The First Commissioner learns that the Committee of the Metropolitan Board, to whom the matter was referred, have unanimously declined to depart from their previous decision or to adopt the plan recommended by your Institute.

With respect to the amended plan now submitted by the Institute the First Commissioner is of opinion that it is open to serious objection, and he is unable to hold out any hopes that it will be adopted.—I am, &c. (Signed) A. B. MITFORD, Secretary.

The Secretary, Royal Institute of British Architects.

II.

Royal Institute of British Architects,  
July 18, 1882.

Sir,—We have the honour to inform you that the Council of the Royal Institute of British Architects, at their meeting held yesterday, had under consideration your letter of the 7th inst., and they have consequently directed us to express regret that the action taken by them in reference to the proposed alterations at Hyde Park Corner should have been distasteful to the First Commissioner of Her Majesty's Works and Public Buildings. In the course pursued they have been actuated by a sense of duty and an earnest desire to assist him in the laudable endeavour to achieve a great and necessary Metropolitan improvement.

The real point at issue is whether, to quote your own words, "the scheme proposed by her Majesty's Government, and for which her Majesty's Government are responsible," is deserving of

support and commendation both as regards its architectural effect when executed and the general improvement of the locality. The Council of the Institute, therefore, do not consider it necessary or desirable to enter upon a discussion of the several subsidiary matters contained in your letter, further than to inform you that the resolution to memorialise her Majesty's Office of Works and the Metropolitan Board of Works on the subject of the proposed alterations at Hyde Park Corner was unanimously passed at one and the same meeting—namely, that held on the 19th ult. But they desire to repeat and amplify their opinion that, while the general idea of the improvement proposed by her Majesty's Government merits approbation, the scheme itself is defective in two main particulars.

First, the official model and published plan indicate no increase whatever to the width of Piccadilly at its junction with Hamilton Place, and although the First Commissioner stated to the deputation of the Institute, which he was good enough to receive on the 27th ult., his intention of widening Piccadilly at that point, he admitted that the proposed increase would be to the extent only of the width of the foot-pavement. This, in the opinion of the Council, is inadequate. They therefore venture to maintain that the plans they presented possess in this respect a material advantage over that of the Government—an advantage to which, in the public interest, they would again direct serious attention. Secondly, the contemplated removal of the Arch from its present position would destroy a well-balanced architectural group, involving, moreover, an expenditure which, in their opinion, would have little to recommend it unless thereby the artistic reputation of this country were relieved from a merited reproach. But the First Commissioner has held out no expectation of this; for when the deputation waited upon him he was understood to say that although the Arch would be removed, and re-erected elsewhere, there was no present intention of placing the Wellington statue upon an appropriate pedestal.

We are further instructed to express the hope of the Council that the First Commissioner, after renewed consideration of this subject, will consent to modify the official scheme for the improvement of Hyde Park Corner, in order that when executed it may not only efficiently provide for the exigencies of the public traffic, but also conduce to the architectural embellishment of an important part of London.—We are, &c.

(Signed) J. MACVICAR ANDERSON, Hon. Sec.

WILLIAM H. WHITE, Secretary.

The Secretary, her Majesty's Office of Works, &c.

III.

H.M. Office of Works, July 20, 1882.

Sir,—I am directed by the First Commissioner of her Majesty's Works, &c., to acknowledge the receipt of your letter of the 18th instant in regard to the proposed alterations at Hyde Park Corner.—I am, &c. (Signed) A. B. MITFORD, Secretary.

The Secretary, Royal Institute of British Architects.

## LEGAL.

Court of Session, Edinburgh—July 21.

(Before Lord KINNEAR.)

SUBSIDIARY CONTRACTS.

Decision has been given in an action which was raised by James Ritchie, builder, St. Andrews, against William Davidson, hotel-keeper, and John Gamble Patterson, clubmaster there, for the balance due under a contract for the mason work of two villas at the Scores of St. Andrews. The contract price was 1,646*l.*, and pursuer claimed 257*l.* for variations on the specifications, 21*l.* for jobbing—together 1,924*l.*; but gave credit for 1,397*l.* already paid, and 132*l.* for articles supplied by the defenders; so that the amount sued for was 395*l.*, with interest. The defenders said that the only offer accepted by Mr. Milne with their authority was one for 1,447*l.*, and that he had no authority from them to accept an offer for 1,646*l.*

Lord Kinnear, after hearing evidence, said, in giving judgment, that the architect had authority to accept the second contract, and that the principal was responsible for the contract price. The work was begun and completed by the pursuer with the knowledge of the defenders in terms of the written contract and on the faith of it, and it was not said that the defenders made any particular inquiry as to the terms. The buildings were now finished, and then came the question what they were worth. The proof of this was not very satisfactory, but it was spoken to by three witnesses. As to the extra work, the conditions of the contract must be adhered to. They were that the extra account should be adjusted under it. The defenders admitted their liability for this account, so that he was relieved of the difficulty of further considering that matter. His Lordship gave decree for the amount concluded for, and found the defenders liable in expenses.

The Custom House in Lower Thames Street has, it is said, been sold for 2,000,000*l.* to the Corporation of London, in order to extend Billingsgate Market.



## CHURCH BUILDINGS AND RESTORATION.

**Ribchester.**—The ancient church of Ribchester has formally been reopened. The church was known to have been in existence in the year 1291, and remained unchanged materially, consisting of nave, side aisles, chancel, porch, and low tower. The village was a place of importance in the old Roman times, and the Bishop of Manchester, in his sermon at the opening ceremony, said:—He supposed it was the abundance of water, that first necessity of life, which led the old Roman soldiers to pitch their tents there some 1,600 years ago, and to choose that place for their encampment. Civilisation followed in their train, and the blessings of Christianity had been known in the village for many generations. He did not know who was the first evangelist who came preaching the gospel of Christ on the banks of the Ribble, but it was said in ecclesiastical tradition that Paulinus, the great Saxon missionary bishop of the first half of the seventh century, was the first visitor, and according to ancient records a church fabric existed on that spot more than 600 years ago. The restoration of the chancel just finished led him to hope that the work would not stop there. He hoped that the nave, in which there were many features of interest, might in time also be restored to something like its pristine beauty, proportion, and noble simplicity. He was told it would cost about 3,000*l.* to make a complete and thorough repair, but it need not all be done at once. Perhaps they might begin with the seats, which he was told were not the best or most comfortable, or the roof, which was getting shaky and dangerous, as old roofs, including that of their own Cathedral at Manchester, were in the habit of doing. He hoped, however, that an earnest effort would be made in this direction, and that they would make the old church of Ribchester in this nineteenth century something like what he imagined it was six hundred years ago. Those who built churches in the earlier days did not scamp their work. They built soundly and substantially, and those who had an eye for such things would admit that our forefathers, with far more imperfect appliances and without our scientific knowledge, managed to erect much more beautiful and durable edifices than we could build now. Though he did not put the restoration of old churches among the very first necessities of the age, still, when he saw an ancient church like that, and heard that it was getting into a somewhat precarious and unsound condition, he could not help thinking that money might be spent in a great deal worse manner than upon the restoration of churches.

**Featherstone.**—The church of All Saints, Featherstone, near Pontefract, has been reopened after being closed for the past two years, while undergoing a thorough restoration. Messrs. Healey, architects, of Bradford, have carried out the restoration. The south portion of the church has been entirely rebuilt, and the tower partially restored. There are three bells in the tower, the earliest of which, inscribed to St. John, dates from pre-Reformation times, and the other two (St. Peter and St. James) are of later dates.

**Upholland.**—The foundation-stone of a new chancel for the church of St. Thomas the Martyr, Upholland, has been laid. The addition to the old church is 32 feet by 22 feet, and, with the restoration of the interior of the church, which has been completed, will involve an expenditure of 2,000*l.* The plans have been prepared by Mr. Basil Champneys, architect, of London, and the chancel will be built in the characteristic style of the ancient structure.

**Widnes.**—The memorial-stones of a new Wesleyan chapel, Oakland Street, have been laid. The building will be 58 feet by 50 feet, and there will be two entrances, one on each side of the front, contrived so as to form transepts. Galleries will run round three sides of the building, and the staircases from them will open into the transepts. The pews will be of stained, varnished deal. In the transepts two vestries will be constructed. The chapel will be built of patent bricks; white stone will be used in the string-courses. The building will be roofed with Buttermere sea-green slates. The total cost is estimated at 2,500*l.* Mr. H. Isitt is the architect.

**Newent.**—A survey of the condition of the parish church, Newent, has been made for the parish authorities by Messrs. Middleton & Son, architects, of Cheltenham. Messrs. Middleton report that the restoration of the windows on the western side is urgent because of their dangerous state of dilapidation; that the aisle needs extensive repairs to the roof, floor, fittings, windows, and exterior walls; and the porch needs renovation. The cost of these necessary repairs is estimated at between 500*l.* and 600*l.*, and an appeal is to be made to the public for funds to carry out the work.

**Salford.**—The restoring the external structure and making some alterations and additions in the interior of St. John's Roman Catholic Cathedral, Salford, has been begun. The Cathedral was dedicated and opened on August 9, 1848. The original cost of the building and site was about 20,000*l.*, the architects being Messrs. Wightman & Hadfield, of Sheffield. The work of restoring has commenced at the west front of the Cathedral, the very beautiful

design of which is pretty much a reproduction of the west front of the celebrated Howden Church, in the East Riding of Yorkshire. The massive buttresses, spire turret, and other parts of the building will be entirely repointed and put in repair. When the exterior is completed the interior will be beautified, and some additions made in the structure, the most notable of which will be the raising of a new altar in the Lady Sanctuary, designs for which have been prepared by Messrs. C. W. & P. P. Pugin.

**Cullercoats.**—The foundation-stone of a new church will be laid on the 4th prox. The Duke of Northumberland has given the site and undertaken the cost of erection, amounting to about 18,000*l.* Land has also been given as the site of a vicarage-house, towards the building of which the Ecclesiastical Commissioners have contributed 1,500*l.* Mr. J. Pearson, R.A., is the architect, and Mr. W. Scott, of Newcastle-on-Tyne, the builder.

**Norton.**—The church of Norton, notable as being the burial-place of Chantrey, has been reopened after undergoing thorough restoration from the designs of the late Mr. Street, R.A., and completed under the direction of Mr. A. E. Street, M.A. The work in the chancel and in the Blythe Chapel adjoining is due to members of the Cammell family. A large stained-glass window, executed by Mr. E. Frampton, of 82 Buckingham Palace Road, London, and representing the old and the new Dispensations, is fixed at the east end. Oak is used for the roof of the chancel, and all the fittings here are of carved oak, including the choir stalls, screen, altar-table, and reredos. Encaustic tiles and stone are used for the flooring of the chancel, while the step to the altar-table is of Derbyshire fossil marble. The chancel arch, which was in a dangerous condition, has been rebuilt, and the three windows in the Blythe Chapel, which were previously partly built up, are now opened down to their original level. A new organ-chamber has been constructed by piercing the north wall of the chancel. A brass lectern has been presented by Mrs. Bagshawe in remembrance of the late Mr. Street. The heating is by means of hot-water pipes with gratings, supplied by Messrs. Newton, Chambers & Co., of Sheffield; the floor under the seating is laid with Gregory's patent wood-block flooring; and the nave and aisles, tower and porch, have flooring of red and black tiles from the works of Mr. Godwin, of Lugwardine. The west window in the tower has been filled with fine stained glass by Messrs. Ward & Hughes.

**Coggeshall.**—The foundation-stone of a Wesleyan chapel has lately been laid. A new building being required, Mr. S. W. Horton, of East Grinstead was commissioned to prepare plans. Tenders were invited, and that of Messrs. M. A. Gardner & Son, amounting to 785*l.*, was accepted. The building is to accommodate over 200 persons, its proportions being 50 feet by 27 feet. A gallery will be erected at the entrance. The chapel will be seated with benches of yellow deal. The platform and gallery front will be of pitch pine.

## SCHOOL BUILDINGS.

**Gateshead.**—A public meeting to inaugurate the opening of the new Board schools just completed in South Street, Durham Road, Gateshead, was held on the 20th inst. The new buildings stand in a densely-populated and rapidly-increasing district. The schools are arranged in three departments for 284 boys, 284 girls, and 310 infants, and in addition there are two rooms for pupil teachers' classes, for 30 each; the total accommodation provided being for 940 children. The cost as completed has been 4,150*l.*, or 4*l.* 10*s.* per scholar (the architects' estimate to the Board being 5*l.* 5*s.*), and the works have been finished in two months less than the specified time. Mr. Edington has acted as clerk of the works, the contractor being Mr. Alexander Thompson, of Gateshead, and the buildings have been erected from the designs and under the superintendence of Messrs. Oliver & Leeson, architects, Newcastle.

**Halifax.**—The Halifax School Board are about to provide accommodation for 100 more scholars at St. Thomas's School, Claremount the plans for which have been prepared by Mr. R. Horsfall. The extensions will consist of a new wing added to the middle of the west or lower side of the large room. It will be divided into two classrooms by revolving shutters, and as these can be lifted, the new room can be used as extra accommodation to the large room. The area will be 42 feet by 24 feet. There will be a covered playground underneath.

**Denton.**—The Russell Scott Memorial Schools were opened on Saturday last. The style is free Gothic, and the buildings were designed by Mr. P. Pons, architect, of Manchester, and erected under his supervision by Messrs. Holmes & Webster, Ashton-under-Lyne. On the ground floor are a kitchen and vestry, connected with the present chapel; the girls' entrance and staircase, leading to their classrooms; an infants' schoolroom, 28 feet by 27 feet, and infants' classroom; also a boys' main entrance, with principal staircase; and a fives court, 24 feet by 20 feet, with all requisite accommodation. The first floor consists of a girls' class-



room, 26½ feet by 18½ feet; also a boys' schoolroom, 40 feet long and 27 feet wide, with principal and secondary staircases. Over the main staircase is a tower, with high-pitched roof, which is utilised by providing a library, storeroom, staircases, and room for water cisterns, which supply the whole of the establishment. The walls of the principal rooms and staircases are lined with white glazed bricks and coloured bands. The girls' and infants' classrooms can be shut off from the main schoolrooms by revolving shutters; and in the girls' chief classroom, by lifting the shutters a platform is formed 3 feet 6 inches above the level of the boys' schoolroom, with a 15-foot opening, making a proscenium, and giving a total length to the room of 59 feet.

**Workington.**—The memorial-stones of a Primitive Methodist chapel and school have been laid. The style adopted for the building is Gothic. The site is in John Street, nearly opposite the Board schools. The work is being carried out by Mr. L. Fergusson, contractor, from the designs of Mr. William G. Scott, architect, of Workington. The cost, it is estimated, will be about 1,700*l*.

**Bedford.**—The ceremony of opening the High and Modern School for Girls, erected for the Harpur Trustees, has lately taken place. Mr. Basil Champneys, of Buckingham Street, Strand, is the architect. The school is a two-storeyed building in early Jacobean style, constructed of red local brick with Ancaster stone dressings. The plan resembles the letter E, the two wings of which are respectively for the High and the Modern School, both schools including ample class-rooms, and the High School a library, music-room, and laboratory. These are separated by a large hall, which can be used by the two schools, either in common or alternately, by means of sliding shutters, and which occupies the centre of a frontage over 200 feet in length. The contract for the work was taken by Mr. S. Foster, of Kempton, for 10,600*l*. Mr. W. H. Williams was clerk of works. The desks and school furniture were supplied by Messrs. G. M. Hammer & Co., of the Strand, London.

### NEW BUILDINGS.

**Ayr.**—A new hospital has been erected at Ayr on the Holmston Road, near the Kyle Union Poorhouse. The building, which has been designed in the Queen Anne style, has a front elevation of 400 feet, and is in the main or central portion three storeys high. The general hospital has accommodation for 44 patients, while the fever hospital, which is detached, has ward accommodation for 20. On the ground-floor are board-room, dispensing and doctors' consulting rooms, the matron's and nurses' quarters being on the second and third floors. It is built of Ballochmyle red sandstone. The cost is about 8,000*l*. Mr. Murdoch, Ayr, was the architect.

**Newcastle-on-Tyne.**—Alterations and improvements have lately been carried out at the Assembly Rooms, Westgate Road, under the direction of Mr. R. J. Johnson, of the firm of Messrs. Austin, Johnson & Hicks, architects. One of the chief works has been the improvement of the means of ventilation. Mr. R. Whichello has executed the mason and joiner work, Messrs. Walker & Emly executed the ironwork and plumbing, and Messrs. Richardson carried out the works of redecoration.

**Forres.**—A block of buildings has just been completed in the High Street for Mr. Gill, postmaster. The building has been designed by Mr. John Rhind, architect, of Inverness, in the Scottish baronial style, and comprises two large shops—each with back shops and ample cellarage—with the post-office on the ground floor. The entrance to the post-office is by a covered passage, by which access is obtained to the garden ground at the back. In this passage also are the doors of two dwelling-houses, into which the upper portion of the building is divided. Bay windows are carried up two storeys in height, and rest on corbels over the lintels of the shop doors, and are finished with traceried parapets at the top. The mullions are ornamented with carved trusses, and the panels below the windows have moulded balusters, and shields with the heraldic bearings of Forres, &c. Above these are gables in which are the windows of the upper bedrooms. The contractors for the work were—Messrs. Donald Macleod, Inverness, mason; Alex. Laing, Forres, carpenter; John Taylor, Forres, plumber; Alex. Forbes, Forres, slater; Adam Ross, Forres, plasterer; Wm. Smith & Son, Inverness, ironwork; John Alves, Forres, painter.

**Fowey.**—The foundation-stone of the new Fowey Hotel was laid on Saturday last. The hotel is to be built on a site on the Esplanade, commanding a view of the harbour and sea. It will consist of a ground-floor and five storeys, with a billiard-room attached at the western end. Mr. A. S. Clunes is the architect, and Mr. J. Smith, of St. Austell, the contractor.

**A New Church** is projected for Matlock Bank, to be erected at a cost of 6,000*l*., furnishing accommodation for 600 persons. It is not, however, contemplated to build more than the chancel and part of the nave, at a cost of about 3,000*l*., leaving the remainder of the nave, together with tower and spire, to be completed as soon as the necessary funds are obtained.

### ENGINEERING WORKS.

**Ship Canal, Mull of Kintyre.**—The Duke of Argyll was present on Tuesday at Glasgow at a large and influential meeting of gentlemen favourable to the improvements of the east and west lochs of Tarbert, in the county of Argyll, and to the formation of a canal between the two lochs. The proposal submitted to the meeting is to form a canal through the Mull of Kintyre, and thereby provide a direct outlet for shipping traffic from the Firth of Clyde to the west and north of Scotland. His Grace, who presided, explained that the canal would be two miles in length, and the saving it would effect for vessels going to the west and north of Scotland would be about 115 miles. The channel was proposed to be 50 feet in width and upwards of 18 feet in depth, and the cost was estimated at from 150,000*l*. to 200,000*l*. Calculations had been made showing that vessels to the amount of about 500,000 tons a year will be expected to take advantage of the canal, and, estimating the charge for the use of the canal at 6*d*. per ton, this would give a revenue of 12,000*l*., which was considered a good return upon the outlay. Resolutions were afterwards passed in favour of the formation of the canal, and a large and influential committee was formed to carry out the undertaking. At a meeting of the Committee held afterwards, Mr. J. Wyllie was appointed to carry out the organisation of the Company. The preliminary details were adjusted, and a large portion of the capital was subscribed.

### ARCHÆOLOGY.

**The Salford Charter.**—The deed from the first Earl of Chester, by which Salford secured the rights of a free borough, has been translated by Mr. T. N. Morton. The charter contains twenty-six clauses. It provides that each burgess may hold one acre of land with his burgage, and shall pay twelve pence per year for rents; each burgess refusing to answer the plea of the Reeve in the Laghe-moot forfeits twelve pence, and the same penalty, with an additional fourpence for the reeve, if he neglects the plea of another burgess; if one burgess strikes another he may make peace in view of the burgesses, saving the right of the lord to twelve pence; the burgesses were not to answer pleas save in their own Portmannemoot; cases of theft were to be tried by the prefect saving the lord's right; if a complainant makes no appearance for three days, he shall be at the mercy of the lord of the borough; no burgess to bake bread for sale except at the bakehouse belonging to the lord of the borough; the burgesses are to grind at his mill, if he have one; the burgesses can choose the reeve from themselves "whom they wish;" the burgess might sell or mortgage his tenement, the nearest heirs having the preference; if he have no heirs he can leave his burgage and chattels to whom he pleases, but it must not be alienated in religion; burgesses might arrest their debtors; chattels of burgesses might not be detained for any other debts than their own; burgesses were to be free of all tolls whether at fair or market, except the Sal toll; whoever broke the assize of bread or beer was to "suffer forfeiture of twelve pence three times, and the fourth time he shall perform the assize of the town;" the burgesses were to have free pasture in the wood, plain, and pastures belonging to the town; the burgesses might "take reasonably in the aforesaid wood all necessities for building and burning;" the wife might plead in the absence of the husband, and the husband for his wife and family; the widow was to remain in the house with the heir during her widowhood; when a burgess died all that was to be given to the lord was a sword, a bow, or a lance; no one was to exercise the calling of shoemaker, currier, fuller, or any such, except in the borough; the rents were payable threepence on each of four specified days; "all the above pleas to be decided before the bailiffs of the earl upon view of the burgesses."

### ART WORKMANSHIP.

**Decoration of Lerwick Town-hall.**—The heraldic decorations of the front of this building, which have been entrusted to Inverness sculptors, will occupy the wall space above the windows of the ground-floor, and below those of the main hall above. They consist of four elaborately-carved stone panels, designed by Mr. Ross, architect, each of which bear three armorial shields—the centre one in each panel bearing a national emblem, and the side ones the arms of noble families intimately associated with the history of the islands. The first panel carries on its centre shield a Norse dragon ship; the right hand shield bearing the arms of the Earl of Morton; the left one those of the Earl of Zetland. The second panel bears—centre shield, the lion of Norway; to the right the arms of the Earl of Orkney; to the left, those of the Earl of Caithness, representing the line of the old St. Clair Earls. The third panel bears—centre, the lion of Scotland; to the right the arms of the Stuart Earls; to the left those of the Barons St. Clair. And the fourth panel bears—centre, the galley of Orkney (the ancient shield of the earldom); to the right the arms of Bothwell, Duke of Orkney and Shetland; to the left the shields of the St. Clairs of



Rosslyn, the descendants of the ancient line of earls. The ground of each panel, being the interspaces between the shields, is filled in with ornamentation of devices of delicate foliage, having special reference to the shields. Several additional donations of stained-glass windows have been received from local public bodies and other donors. The Earl of Zetland has presented one of the largest stained-glass windows of the main hall, the companion to which is the window which the Sheriff of the county some time ago intimated his intention to present. One of these windows—the execution of both of which has been entrusted to Messrs. Ballantyne, of Edinburgh—will contain full-length figures of King Harold the Fair-haired, and of Eystein, Archbishop of Thronhjelm, the metropolitan prelate of the ancient see of Orkney and Shetland, who died 1158. The other will represent Earl Rögnvald of Orkney—the first earl of the earldom—and Bishop William the Old, the first bishop of the diocese of Orkney and Shetland. King Harold—who visited Shetland A.D. 870, after his subjugation of Norway—and Earl Rögnvald will be represented in full armour, crowned and coroneted, with the arms of Norway under their feet; the prelates in ecclesiastical vestments, mitred, and bearing croziers. Besides the oriel window, there are four windows in the front façade of the great hall, of two lights each, the subjects of all of which are noted personages connected with the early history of the islands, who will be represented as full-length figures, in the costumes of their day. These windows are to be executed by Messrs. Cox, Son, Buckley & Co. In the oriel window of the great hall is to be placed the medallion presented by the city of Amsterdam; and in four small lancets below the rose window, the design of which is not decided on, will be represented the armorial bearings of some of the leading county families. Morton Lodge of Freemasons is also to present a stained-glass window for the principal staircase leading to the main hall, and other donations are expected.

### ART SCHOOLS.

**Architectural Museum.**—The report which has been presented to the subscribers says that the usual effects of the deficiency in the amount of the annual subscriptions would have been felt but for help received during the year, viz.—1st, a generous donation from the Gilchrist Educational Trust of 25*l.*; 2nd, a donation from Mr. Wyatt Papworth of 5*l.* for a special purpose, that of cleaning the casts, and various other donations from kind friends to the amount of 5*l.* 3*s.*; 3rdly, towards the end of the year the balance of the Scott Memorial and the interest during its investment was, according to the decision at the Chapter-house meeting, held immediately after Sir Gilbert Scott's death, handed over as an endowment of art teaching at the Royal Architectural Museum. This was the cause of the large balance shown in the balance-sheet. On the other hand, the subscribers have to be reminded that at the end of the year there were two accounts unpaid, viz.—88*l.* to the builder for a very successful and useful new classroom, only opened in the beginning of that year, and 34*l.* to the solicitor, being the last remaining item of the expenses incurred in the purchase of the lease. These have been paid in the early part of this year, 1882, so that now, at the date of this report, there are no liabilities, but still the ever-recurring difficulty of insufficient subscriptions has to be met. The results at this year's National Competition, which are just made known, are: one silver medal for a design in model, sent in in competition for the Plasterers' Company's Prize, and which also gained the second prize, making the fifth year in succession that students from the school have gained one or other prize from that Company; two bronze medals, one for a design for an iron gate, and the other for studies of mosaics; and two National book prizes, one for designs for stained glass, and one for painting from life; in the second grade Local Examinations 27 certificates have been obtained and 10 prizes. The school numbers are well maintained, there having been 96 students in the evening class since September last, 25 in the life class, and eight in the ladies' class.

**Messrs. Chubb & Son**, the patent lock and safe makers, are about to transfer their lockmaking factory from Wolverhampton to the large Patent Safe Works built by them a few years ago in Glengall Road, Old Kent Road, London. At the London works they have room for a thousand workmen, and already possess extensive boiler and engine power, together with a quantity of powerful machinery. They propose to add special machines for making certain parts of their locks, leaving the more complicated and delicate work to be done, as now, by hand. Messrs. Chubb have made about one million locks and many thousands of safes since commencing business 64 years ago. The average length of time each workman (including boys) has been in their employ is 17 years.

**A Large Party of Gentlemen** on Friday last week were conveyed by train over some half-mile now completed of the new Inner Circle Railway. The distance traversed was from Aldgate Station to Trinity Square, Tower Hill.

### GENERAL.

**Mr. C. N. Armfield**, of Whitby, was appointed architect to the new church to be built on the West Cliff, Whitby, at a full meeting of the committee held in Hagersgate House, at which the Rev. Geo. Austen, M.A., presided.

**Messrs. Rollinson & Son**, architects, of Chesterfield, have prepared plans for the extension of the school at Hackenthorpe.

**Mr. D. W. Stevenson, A.R.S.A.**, has obtained the commission for the statue of Robert Tannahill, the poet, which is to be erected in Paisley. The second prize was awarded to Mr. W. G. Stevenson, of Edinburgh, and the third to Mr. J. E. Christie, of London.

**Sir William A. Rose & Co.'s Premises**, Vintry Wharf, Anchor Alley, Upper Thames Street, were destroyed by fire on Saturday night. The cause is unknown. It has been announced that the premises were used for rape and colza oil refining, and are in no way connected with Sir W. A. Rose & Co.'s general oil and colour business, which is being carried on as usual at Queenhithe.

**Mr. Lynam**, architect, of Stoke-on-Trent, has prepared plans for the proposed new hospital at the Stoke-on-Trent Workhouse.

**The Tender of Mr. Hirst**, of Sunderland, has been accepted for the construction of a large graving-dock at West Hartlepool.

**Sir E. Bates**, it is said, intends to convert the premises used as a sugar refinery, and lately purchased by him, at Plymouth, into blocks of artisans' dwellings.

**The Monument to Sir Edwin Landseer**, by Mr. Woolner, R.A., has been placed in the crypt of St. Paul's, near the tomb of the artist, and in the next vault to the one where Sir Christopher Wren is buried. It consists of a medallion portrait in profile, below which is a bas-relief from the well-known design of *The Shepherd's Chief Mourner*.

**The Board of Trade** has sanctioned the proposed plans for the extension of Eyemouth harbour, and negotiations are on foot to obtain the money necessary for the carrying out of the works.

**The Hove Commissioners** have approved of a recommendation of the Sanitary Committee that steps should be taken to provide 6,000*l.* for the purpose of erecting a sanatorium on land purchased by the Board at Hangleton Bush.

**A Carved Oak Reredos**, designed by Mr. J. Oldrid Scott, has been erected in Bangor Cathedral. The work has been executed by Messrs. Thompson, of Peterborough.

**A Railway Station** for passenger and goods traffic is being erected at Fleetwood. The cost will probably reach 120,000*l.*

**The Bournemouth Improvement Commissioners** have decided to obtain plans from Mr. Birch, C.E., for the erection of shelters on the pier at a cost not exceeding 2,000*l.*

**The New Corn Exchange** at Ipswich was opened on Wednesday last. It has cost about 35,000*l.*

**The Wolverhampton Borough Accountant** has prepared a statement of the moneys hitherto expended and received on the alteration of streets in connection with the Artisans' Dwellings and Street Improvement Scheme, which shows that up to the present the net expenditure has been 245,000*l.*

**A General Meeting** of the London and Middlesex Archaeological Society will be held at the church of St. Olave, Hart Street, on Saturday the 29th, at 2.30 P.M., when papers will be read on "The History and Antiquities of St. Olave's," by the Rev. A. Povah, M.A., and "The Worthies connected with the Church," by Mr. Henry B. Wheatley, F.S.A.

**The Somerset Herald** has prepared a design for the arms of the new City of Newcastle. It consists of the ancient device of the three silver castles on a red field, and is surmounted (on what is called a chief) first, with a representation of the cross of St. Cuthbert, as commemorating the see of Lindisfarne; and secondly, of the see of Durham, out of which Newcastle has been formed, thus giving in heraldic arrangement a history and chronology, as it were, of the bishopric. The design has been approved of by the City Council.

**The Paisley Improvement Commissioners** have resolved to purchase no more old properties. They still hold sites from which old buildings have been cleared away which are valued at 22,500*l.*, and when the improvement operations now in progress are completed there will be a total deficit of 7,200*l.*, which must be met by assessment.

**Messrs. Underhill & Co.**, of Upper Thames Street, have issued their "Architects' and Builders' Pocket Compendium" for 1882. It contains illustrations of the innumerable articles supplied by the firm, and as the prices are attached the volume will be found invaluable when estimates are being prepared. It has, too, an advantage of being portable in size, and consequently differs from the majority of similar publications. All architects, surveyors, and builders should obtain the volume.



# The Architect.

## THE PROPOSED COMPETITION FOR THE OFFICES OF WAR AND ADMIRALTY.



R. SHAW LEFEVRE has virtually announced the intention of the Government to invite a competition of architects for the new Offices in Whitehall. Lord ELCHO expressed the further hope that it would be an open competition, and the First Commissioner replied in effect that his leaning was also that way. Some of the best architects, he

said, would decline to engage in a perfectly open contest, but the new system of a double competition was under consideration—as, we presume, a means of overcoming this difficulty.

If the architectural profession, or even the professional press, is to discuss this matter before instead of after the event, it must be done with some sort of apology to the Government for the exceedingly untoward action recently taken by the Council of the Institute of Architects with reference to two dignified national projects, one of which was in fact the selection of the site for the very buildings now in question. We know quite well what is said of the bird that fouls its own nest, but it is so much more than doubtful just now whether the Council Room of the Institute deserves to be respected as the nest of English architects in any sense that is not merely nominal, that it would be useless for us to pretend to regard it as an offence against either loyalty or good taste if—on the part of architects generally, and indeed on the part no less of the general body of the Institute itself—we take leave to repudiate the agency of Mr. HORACE JONES, President by rotation, and the friends who have supported him from a mistaken idea of loyalty, and to point out the circumstance that the Institute has never been consulted at all, directly or indirectly, and that the assumption by the Council of the right to lecture the Government without consulting the constituency at large, is an act of mere usurpation. The fact that the Council's business is "to manage the affairs of the Institute"—that is to say, to lay out its everyday arrangements as an executive committee—is, for some reason that no one can understand, confounded by the members of the present Council with the doctrine that they are to perform arbitrarily all the functions of the Guild; which is absurd. Blunders like those which have lately been committed are the natural consequences of such unconstitutional policy; and Mr. SHAW-LEFEVRE and his advisers, as real and not sham public men, will easily see how the matter stands, when they are made aware of the simple circumstance that the measures which they have been so indignantly complaining of are the proceedings of a small close committee which have never been submitted to any constitutional test of general opinion.

With regard, then, to the intended competition, we must certainly acknowledge, even after all that has been said of late in this journal and elsewhere against competitions on principle, that there are few persons, if any, who would object in practice to the proposition that in the case of a great national work of monumental character, competition of some form or other is the right thing. There are three reasons for this, all of the greatest weight: firstly, the Government is entitled and bound to ask the architects of the country at large for the best suggestions they can produce; secondly, the architects, as an act of public loyalty, may be expected to recognise, even at a sacrifice, the obligation here imposed upon them; thirdly, every architect in the kingdom is entitled to aim at the distinction which may be acquired by the production of a successful design, or indeed of one of a selection of successful designs. Government work on the grandest scale differs from all other work in these respects, and no one need deny himself the pleasing duty, or be denied the possible advantage, of competing, even at the expense of the competitors, on this peculiarly high ground. We may add one other consideration; the tendency of the age in all public work is to enlarge the limits of competition, using the term in its widest sense. The time for retaining a Sir ROBERT SMIRKE to build the Houses of Parliament has therefore gone by; there are half a dozen or half a

score of comparatively unknown BARRYS always at hand, and each of them has his Sir EDWARD CUST—or his Lord ELCHO—in the House of Commons or in the Ministerial ante-chamber. It is not necessary, even, that we should press the commercial question itself in this particular field; the men whom we may persist in calling by the name of fools for engaging at their own cost in the random competitions of advertising committees we may yet encourage without inconsistency to spend their money freely in the noble contest which has national honour for its reward.

As for the particular form which the proposed competition ought to take, it is to be remembered that the Government has already tried very fairly both the rival modes of the open, public, or universal competition, and the select or limited competition; indeed, it has perhaps to be also borne in mind that both modes have turned out rather unsatisfactorily. There is no urgent reason for going further into the question at present, but it would be vain to deny that Sir GILBERT SCOTT's Home and Colonial Offices are not a highly popular production, or to disguise the fact that the new Law Courts are already spoken of with grave apprehension by the practical lawyers who are to occupy them, and who will probably prove to be much less mealy-mouthed than the officials of Downing Street. The blame for this want of success we have been accustomed to lay at the door, not of the architects, but of those meddlers with architecture who persist in spoiling the game sooner or later, not only of every Government competition, but of every successful competitor who carries off the prize. How far we ought to hope for better things in the new venture now in hand we cannot presume to say; but hope springs eternal in the architectural breast, and we may at any rate try once more.

We do not think Mr. SHAW-LEFEVRE is quite right in supposing that architects of high standing and merit will refuse to join in a public or open competition for so very important a work as the one he has now in hand. In the last case of the kind, that of the offices for War and Foreign Affairs five-and-twenty years ago, the best men of the day went into the contest cheerfully. Their object, indeed, was a simple wish to do honour to the occasion, and to seek for themselves honour rather than payment. A very large number of premiums were awarded and paid, but these were not any more adequate in amount than they usually are. A correspondingly large number of competitors were consequently more or less disappointed. But in the end, even when SCOTT was appointed to carry out the work, on the principle, as Lord PALMERSTON said, that the horse which came in always second had been awarded the stakes, very little grumbling was heard. The honour of having received a high place was accepted as the real reward by perhaps all concerned.

Compared with this instance, the competition for the Law Courts and the National Gallery cannot very well be called either a more dignified or a more profitable transaction. A certain number of architects were invited to prepare competition designs for 800*l.* apiece. Some of these—Mr. GIBSON, for instance, and the late Mr. SOMERS CLARKE—declined the invitation; but this was quite understood to be not on any ground of their own superior personal consequence, but rather as the result of a too candid calculation of their chances of success. Certain of the other persons selected no one could regard as worthy of the compliment. Some of them touted openly in the exhibition-room. Several of the designs were almost childish in their deficiencies. The conclusion of the whole adventure was most undignified, most unprofitable (except to Mr. STREET alone), most unsatisfactory to the profession at large. As if to put the matter in the worst possible light, Mr. EDWARD BARRY had to be bought off with a promise of the National Gallery which was never fulfilled; Mr. WATERHOUSE was rewarded with the South Kensington Museum, upon which he had no claim whatever, and the succession to which could be fairly claimed two deep when Captain FOWKE died; and Mr. STREET's appointment, if we may speak plainly, was virtually a fluke, and was the occasion of as unseemly a squabble as if the subject had been a Union Workhouse.

Of the two precedents, it will probably be the opinion of most competent authorities that the open competition is in every way the best; and if the principle of the preliminary contest with sketches should be accepted, we can scarcely deny that the occasion would be well worthy of any additional waste of trouble and expense which would be involved. The appointment of adjudicators, however, may be expected to



cause a little more uneasiness than usual. The Government have never yet appointed architects as sole judges; what is called a mixed commission is the rule. Professional adjudication no doubt has its faults, but mixed commission adjudication has nothing but faults. A tribunal of this sort, composed of members of Parliament and their familiars, has no more real value in architectural work than a parish vestry. It is to be hoped that Mr. SHAW LEFEVRE will at any rate not go very far without ascertaining in some way the professional opinion of experienced architects. If he should be disposed to make up matters with the Institute Council, and if they will agree to consult their constituents as they ought always to do, we should say he would do wisely to lay the case before the Institute without delay.

### ANCIENT GREEK DRESS.

GREEK dress, as it appears in all its beauty of folds on the goddesses of the Parthenon or in the balustrade of the Temple of Victory at Athens, has often been the subject of inquiry as to how and by what materials such schemes of drapery could be obtained. There has never been any doubt but that the Greek artist had considerably idealised the reality from which he started, whether it was what he saw in daily life or what he succeeded in arranging on a model. And there ought not to be any doubt that, compared with a modern sculptor, he stood at this great advantage—that from the earliest times in Greece the treatment of drapery had been a constant study, and that even before the time of PHEIDIAS he had inherited a well-defined and powerful tendency in one direction for the rendering of female dress. Alive to this tendency, he could further idealise from the costume of daily life. Again, he had few changes of fashion to disturb him in the sense in which we understand change of fashion. But from this it is not to be supposed that the ancient Greek ladies, though no doubt more kept at home than their modern sisters, were regardless of taste in their dress. The endless number of toilet scenes on the ancient vases shows that this was not the case, and accordingly we are obliged to conclude that the exercise of their taste was directed chiefly to the material and the folds of their dress, such as could be produced without any change in the simple hereditary fashion of a girdle and pins on the shoulders. That also was an advantage to the sculptor. It was the custom of people generally in his time to look to and appreciate those very features of dress which best suited his art. The dress usually worn was one which lent itself equally to any form of action—reclining, standing, kneeling, running—and it is not improbable that habits of freedom and suppleness of movement on the part of the wearers may have largely contributed to keep the form of dress unchanged.

Attempts have been made with many kinds of material to obtain a system of folds approaching to that which the Greek sculptor had before him. Indeed, there was some time ago a gathering of ladies wearing the Greek dress in almost every material possible. But it is only quite recently that pieces of really ancient dress have come to our knowledge. What we knew before from literary records and from figures on the painted vases or in sculpture, did no more than enable us to make conjectures as to which of the modern materials would be the best equivalent. We do not say that the new fragments will in any serious way effect the ideas of artists who have been accustomed to work out figures in classical costume. Their instincts have more or less led them in the right path. Yet it may be worth while to point out the actual character of these ancient pieces of Greek dress.

In the first place, they belong partly to the fifth and partly to the fourth century B.C.; they were found in tombs at Kertch, and they are reproduced in their colours and texture in the plates of the *Compte-rendu* of the Imperial Commission of Archaeology at St. Petersburg for the past year. An examination of them has shown that they are of a fine woollen fabric, woven very much as if they were of very fine linen. In the older and more skilfully executed pieces the threads were dyed before weaving and selected to form coloured stripes in the web. On the cloth thus produced a very rich and effective system of floral patterns was embroidered, fine wools of various colours being used. This embroidery was employed chiefly to form a heavy border round the skirt, and this it would do both in appearance and in fact. On the rest of the dress we may conclude that it was sparingly employed. The

more recent pieces—those of the fourth century B.C.—are not strictly parts of a dress. They are parts of a covering which had been laid over the sarcophagus of a warrior whose skeleton was found within it. But this covering compares so well with the representations of dresses which we occasionally see on the ancient vases, that we may deal with it as if it had really been an article of dress. It was woven in breadths which were sewed together to the required size. The material is a fine wool, but the texture is very open. The wool was undyed, and it was not till the several breadths had been sewed together that the process of decoration commenced. The whole surface is divided into parallel stripes of several inches broad, and on these stripes are painted a series of scenes from the Greek mythology and legend, the name of each figure being added in large bold letters, so that there might be no question of his identity. These designs are painted in a yellowish red colour, while the ground of the garment is of a dark brown. The whole effect is precisely the same as that of a contemporary Greek vase, except that the drawing, as may well be imagined, is very coarse. On the vases it is rarely so, whatever its other faults may be. The difficulty of painting these comparatively small designs on a woollen fabric of loose texture was one which we may suppose could not be easily overcome, or we should have had a better result, seeing that the work to all appearance had been executed in Athens, as indeed were the greater part of the vases, gold ornaments of the richest invention and workmanship, armour and other articles found in the tombs of the Crimea and now in the museum of St. Petersburg.

The resemblance between the decoration of these pieces of drapery and that of contemporary Greek vases is a resemblance which holds good also of the older pieces already described from a tomb of the fifth century B.C., and this is a circumstance which is of some value in archaeology, since it has long been argued that the origin of vase decoration was to be traced to an imitation of patterns evolved in the process of weaving with threads of different colours. But though it was obvious that the earliest vase patterns were such as might most readily have been arrived at in this way, and though the dresses sometimes figured on vases presented the same patterns as the vases themselves, there was yet wanting, until these pieces of actual dress were brought to light, positive proof of the connection between the two industries. The connection now established does not, it is true, go back to the period of the early vases of which we have been speaking; they cannot be later than the eighth century B.C. But it, at all events, gives a foundation from which we may reasonably argue back to that period, and it enables us, at the same time, to partly solve a difficulty which has arisen with regard to a large class of vases found in Cyprus. These vases are ornamented with geometric patterns, and as such would come under the category of those which were influenced by the oldest textile fabrics, from which, however, they differ in form and general appearance. As to vase painting, there is no reason why, if left to itself, it should not advance steadily from one stage of invention and skill to another, as it did in Greece, influencing in its turn the productions of the loom. The decoration of textile fabrics, on the other hand, is at all times liable to fall back on a system of patterns evolved in the process of weaving. Cyprus was, even in late times, a busy centre of textile industry, while in the production of vases it had never made any real progress. We can understand, then, the Cypriote vases in question to have derived their geometric system of decoration from the later textile industry of the island in its humbler productions, where only those forms of ornament were employed which could be most simply reached in the ordinary process of weaving.

The second stage of early Greek vase painting was characterised by parallel stripes painted with figures of animals, the ground of the vase all round these animals being filled in with rosettes. Here, again, an interesting comparison may be made with the ornamentation of Greek dress. The tombs of the Crimea have yielded several thousands of rosettes and other ornaments in thin gold which had been stitched on to dresses the material of which had disappeared from the effects of time. Similar rosettes of very thin gold were found in early tombs in the island of Rhodes. Often for the sake of cheapness the rosettes were made of glass, and were pierced with holes by which they could be sewed down to the dress. Of this latter class examples were found in the graves at Mycenæ, and in other localities of Greece, where the circumstances showed them to be of an early age, contemporary with or



perhaps earlier than the vases which are decorated profusely with painted rosettes.

Contemporary with the vases of the best period, when the human figure became the principal source of decoration, it is clear that the ornamentation of dresses followed in the same lines. We know this not only from the fragments found in the Crimea and from the pictures on vases, but also from the descriptions still existing of the dresses which it was the custom for ladies to dedicate to the goddess ARTEMIS at Athens. These descriptions sometimes read precisely as if they were drawn from a vase. On the dresses there was a much wider scope for colour, and far less for delicate drawing. To judge by the Crimean specimens, the sense of harmonious colouring was excellent. It was evidently a subject of special study, and we are not surprised when we find the names of men who had been distinguished in this artistic industry handed down among the artists of Greece.

### THE "PHRYNE AT ELEUSIS" OF SIR FREDERICK LEIGHTON.

IN a central place in the third gallery at Burlington House is a work by the President, and called *Phryne at Eleusis*. The pervading orange tint of the picture is remarkable—it is, indeed, at first surprising; it might be anywhere, but it is especially so when presented under circumstances of exaggerating contrast. But even when we recognise that the glow of the flesh tints is to be regarded as heightened by the peculiar illuminating sunlight, there still remains an expression of the exceptional colour which the ancients ascribed to the general complexion of PHRYNE. She was one of that class of *hetæra*—of feminine companions—who held at Athens an equivocal position: esteemed at once above and below the Attic matron. The jealous restriction of citizenship to purity of descent from both parents limited choice in marriage, and the established custom of extraordinary seclusion of the sex, even after marriage, was unfavourable to their powers of competing with the beauty, accomplishments, and often intellectual cultivation of adventuresses who shared the general advantage of Hellenic descent. One consequence of this seclusion was naturally visible in paleness of complexion: the Athenian in the "Ecclesiazusæ" of ARISTOPHANES takes his seat in the public assembly, and looks round in amazement at the white faces of the colleagues by whom he is surrounded, but who are in fact the wives who have disguised themselves in their husbands' cloaks, to get their own way for once in a vote for woman's rights. Such complexions account for what we read of the very usual employment of paint; but it is particularly recorded of PHRYNE that so radiant in natural freshness was the brightness of her skin that she dispensed with cosmetics entirely. (Galen, "Protrep." c. 11.) [It is not unfair to suppose that this was the suggestion to the painter for the peculiar and peculiarly effective treatment of this imposing study of the nude. But would it not have been fairer to his admirers, who are not limited to those who are familiar with the byways of ancient literature, and also to himself, if the catalogue had been allowed to supply some further information. Indeed, this instance prompts the inquiry, What is the principle upon which the catalogue is edited in respect of illustrations and quotations? The rarity of such insertions seems to imply that they are at least discouraged, and yet the few that appear do not always seem indispensable, while in other cases help would be welcome and be justified. In the case of this very picture the title has not saved a certain number of critics from desperate attempts to connect it with the most familiar incident in the history of PHRYNE, how the display of her unveiled beauty in open court melted the hearts of the dicasts—the Athenian people in their function of jurymen and judges—and gained her an acquittal.

True it is that on this theory the artist had to be excused for very arbitrary treatment of the story, for, as it runs, it was her advocate HYPERIDES, who, seeing that as his speech went on he made no impression, and that the cause was as good as lost, suddenly tore open her dress and exposed the beauty of her bosom, which was known by report to be most exquisite, and appealed with success to the people to spare the very servant, the priestess of APHRODITE. But still the charge by which PHRYNE was brought in peril of her life was not immorality, which the Athenians would not have recognised in her case and position, but that deadlier and more venomous imputation

of impiety which had once imperilled ASPASIA; and that such a charge should have had reference to Eleusis, the seat of the most mysterious and venerated worship of the Athenians, is likely enough, and might not unnaturally have been assumed. What misapprehension there is here—misapprehension which interferes so seriously with the intention—and contradicts the entire sentiment of the picture might have been spared to us by a line or two of discreet and indulgent words in the catalogue. The proper story is that PHRYNE, on an occasion when the Greeks were assembled in solemn festival, gratified them by a display of the beauty which inspired the art and had exhausted the purse of PRAXITELES: with loosened tresses she went down into the sea, and returned as the Emergent Venus, *Aphrodite Anadyomene*.

As we are arguing in favour of exactness, we must demur to the brief title, *Phryne at Eleusis*. The incident does not belong to that locality, though the fact would scarcely need observation but for the interest that attaches to the general anecdote. ATHENÆUS had authority for relating that on two great festivals, the Eleusinian and that of POSEIDON, PHRYNE repeated this exhibition in view of the collected Greeks, and so became the model to APOLLO for his painting of *Aphrodite Rising from the Sea*, and to PRAXITELES for the statue of the goddess which he executed for Cnidus.

What was the particular festival of POSEIDON, the God of the Sea, does not appear; as regards the other, on the second of the days devoted to the great Eleusinian celebration, and of which the title was "Seaward, ye Mystics"—that is, "ye initiated, or aspirants to initiation"—there was a general movement to the port, and the sea-water was credited with efficacious preliminary purification. Put off her dress and drapery as she might, there is some appearance that PHRYNE in "letting down" her hair was not moved merely to display its abundance, but was aware that she thus regained some of the advantage of a veil, which enhances even when it threatens to disappoint admiration. Indeed, if we were disposed to cavil at the design of the picture at all, we might express a wish that the hair had not only received somewhat more distinctive expression, but had been allowed to flow down in entirely unstinted luxuriance.

Close to the Piræic port, the scene of this incident, was a temple of APHRODITE; it was a dedication of CONON after his naval victory off Cnidus, and to the favourite goddess of that city—the goddess born of the sea and honoured under the title EUPLOIA, as patroness of the seafaring and promoter of favourable voyaging. PHRYNE thus in her exploit might seem to be adventurously personifying the goddess in her proper locality and at the very suggestion of her lover PRAXITELES, who was at the time employing her as the model for the statue which he executed in marble for the citizens of Cnidus—that statue of which the *Medicean Venus* is supposed to be one of the numerous emulative variations. Having broken into conjecture so far, another step is unavoidable. It is to be feared, from what we know too well of the Athenians, that we should be doing no injustice to them if we think it possible that after enthusiastically cheering this exhibition at the time, they very soon afterwards could favourably listen to an accuser who founded on it a capital charge of impiety towards the gods. The spirit in which such a charge might be preferred and might be dangerously entertained is not different from that which we trace in every line of the examination of TINTORETTO by the Inquisition, and which raised an outcry of heresy against BOTTICELLI on the occasion of the first exhibition of the grand composition which Mr. BURTON has just obtained for the National Gallery. Let us hope that these invidious attacks were in no case due to jealous suggestions of rival artists.

**Stained Glass.**—A stained-glass window, which is about to be sent to New Zealand for the music warehouse of Messrs. Milner & Thompson, of Christchurch, New Zealand, has been on view in the showrooms of Messrs. Heaton, Butler & Baynes, of Garrick Street, Covent Garden, London, W.C., who have designed and executed the work. The window consists of a large circular-headed centre panel and two side panels. In the centre are two figures representing the lyric muse Euterpe and the god Apollo with the golden lyre. In the upper portion of the same window are medallions supported by cupids, holding a scroll with the legend "From heavenly harmony this universal frame began." The names of eminent musicians are introduced into the side windows. This glass is of special interest, inasmuch as it is the first specimen of real high-class work that has been sent to this colony. The window will be exported by Messrs. Cohn & Co., of London Wall, E.C.



## THE PRESCRIPTION ACT IN RELATION TO LIGHT AND AIR.\*

IT is obvious that it would in most cases be possible to give positive evidence of user or enjoyment of light, air, or other thing for many years preceding the trial of an action, but for prescription it was necessary to prove it for "time whereof the memory of man runneth not to the contrary," as the legal phrase runs; and this was held to mean not merely the memory of living persons but for a period extending back to the time of Richard I. It therefore became the practice on proof of enjoyment for a limited time, generally twenty years, to allow a presumption that the user had continued for "time whereof the memory of man runneth not to the contrary," unless evidence were given to rebut that presumption. It was from this practice that the period of twenty years became the prescriptive period, but that exact time does not seem to have been absolutely fixed till the early part of this century. I find a case of "Cotterill v. Griffiths" tried in the year 1801, in which it was urged by counsel that a window could not be said to be "ancient" so as to confer a right to light which had existed for thirty years, but Lord Kenyon, the judge, held that that was sufficient, and said that Chief Justice Wilmot had held that if windows were open for twenty years, *or perhaps even less*, that gave the owner of the house such a right that they could not be obstructed, and he added that that had been since considered as the law on the subject. About the same time (1803) user of a way for twenty years was held to raise a presumption of a grant of a right of way by a deed which had been lost, although it was shown that twenty-six years before all ways over the land had been extinguished by Act of Parliament. This user though capable of raising a presumption of a grant by a lost deed was incapable of establishing a prescriptive right, as the Act of Parliament was evidence that the user could not have continued from time whereof the memory of man runneth not to the contrary.

At a later period (1824) Justice Bayley said: "I do not say that twenty years' possession confers a legal right, but uninterrupted possession for twenty years raises a presumption of right, and ever since the decision of "Darwin v. Upton" it has been held that in the absence of any evidence to rebut that presumption, a jury should be directed to act upon it."

It is right to add that a grant could only be presumed, and a prescriptive title established, if the person against whom the presumption was to be raised knew of the user, and was in a position to stop it and did not do so. And this was the same whether the right claimed was a right to light, air, or anything else. It will, however, be seen presently that this is a point in which a great change was effected by the Prescription Act with respect to light, for now a right may be acquired to uninterrupted light, although the owner of the servient tenement may have been out of possession and incapable of obstructing the light during the whole prescriptive period, the tenement being in the occupation of a tenant, or although he may have been quite unconscious, through absence, that his neighbour had opened a new window overlooking his land.

After the commencement of the present century cases relating to prescription and the law of easements became much more numerous, the reports became fuller and more accurate, and the law became more settled and defined. At the same time people began to see the shortcomings of the law and the absurdities which had crept in, and among other absurdities which attracted attention was the fiction of the lost grant which everybody knew full well never really existed, and the presumption of what was called "ancient user," on evidence being given of user for twenty years. At the same time that these legal cobwebs had been collecting, others equally absurd had been woven with reference to fines and recoveries, tithes, and other matters relating to land, which were utterly unintelligible to the mass of mankind, and perplexing to those who understood them. It was thereupon decided by King George IV., in the year 1829, to issue a Royal Commission for an inquiry into the whole subject of real property, and Lord Campbell was appointed Chairman of the Commission. This Commission made a searching and exhaustive inquiry into all the branches of the subject submitted to it, and published three elaborate reports. From these reports arose some of the greatest reforms in the law of real property the country has known. We have nothing to do with the principal alterations in the law which derived their origin from this source, but the first Act which sprang from the labours of this Commission was the Prescription Act (2 & 3 William IV., c. 71). The procedure adopted by the Commission to gain information as to grievances and suggestions for the amendment of the law, was to issue a set of questions to a number of persons inviting answers and suggestions. Three or four of these questions had reference to the law of prescription and easements, but none especially related to light or air. As the inquiry of this Commission led to such important results, I think it only fitting in this paper to set out fully that part of the Com-

missioners' report which had reference to the subject now under consideration.

The Commissioners dealt with the limitation of actions and the law of prescription together, and at the outset of that part of their report, when speaking of both, say, "It might at first sight be considered that the duration of wrong ought not to give it a sanction, and that the long-suffering of injury should be no bar to the obtaining of right when demanded. But human affairs must be conducted on other principles. It is found to be of the greatest importance to promote peace by affixing a period to the right of disturbing possession." Afterwards they treat of the law relating to prescriptive rights to profits *à prendre* and easements alone, and say: "The law relative to prescriptive rights to profits and easements to be taken or enjoyed over the soil of another appears to us to require amendment. This right can only be established by what is deemed legal proof of an adverse enjoyment of 640 years. By the ancient rule of the common law enjoyment of such a right was to be proved from time whereof the memory of man runneth not to the contrary, or during legal memory. Had this meant as far back before the dispute arose as could be proved by living witnesses according to the usual duration of human life, the rule would not have been unreasonable, but the limits of legal memory were formerly fluctuating. They were long made to depend upon the period for bringing a writ of right, which till 32 Henry VIII. was not any certain period before the commencement of the suit, but dated from some historical event from time to time—as the beginning of the reign of Henry I., the return of King John out of Ireland, the journey of King Henry III. into Normandy, or the coronation of King Richard I. The last epoch being fixed by the statute of Westminster 2nd, c. 46, as the time after which seisin must be proved to maintain a writ of right, it was thence adopted as the commencement of legal memory. When 32 Henry VIII. provided that there should be a progressive period for writs of right, legal memory ought, preserving the existing analogy, to be considered as intending a period of sixty years next before the dispute arose, but unfortunately the analogy to writs of right was dropped, and the reign of King Richard I. was adhered to, and is considered the commencement of legal memory at the present day. The practice of the Courts has created a remedy to this inconvenient and absurd rule in ordinary cases; for on proof of enjoyment as far back as living witnesses can speak raises a presumption of an enjoyment from the remote era. In some cases, however, the practical remedy fails, and the rule produces most serious mischiefs. A right claimed by prescription is always disproved by showing that it did not or could not exist at any one point of time since the commencement of legal memory, or although it originated before the commencement of legal memory, that at some subsequent period the servient tenement, or that over which the right is exercised and the dominant tenement, or that to which the right is attached once belonged to the same individual, whereby the prescriptive right was extinguished. Amidst these difficulties it has been used of late for the purpose of supporting a right which has been long enjoyed, but which can be shown to have originated within the time of legal memory, or to have been at one time extinguished by unity of possession to resort to the clumsy fiction of a lost grant which is pleaded to have been made by some person seized in fee of the servient tenement to another seized in fee of the dominant tenement."

It is unnecessary for our present purpose to quote the next part of the Commissioners' report. They go on to explain the falsity of this presumption of the lost grant, which, though gravely proposed by counsel, sanctioned by the judge, and accepted by the jury, was well known to counsel, judge, and jury to have no foundation in fact. The Commissioners then recommended that adverse enjoyment of a profit *à prendre* or easement for sixty years before any action in or over the soil of another person should for the future be deemed conclusive evidence of a right to such profit or easement. But as to this period the Commissioners proposed a further modification of what they had suggested, and said, "But we are also of opinion that with respect both to profits and easements a shorter period, viz., twenty years, should also be established as affording presumptive evidence of right, liable to be rebutted by proof that during that time the servient tenement was occupied under a lease, or was held by a tenant for life, or by a person under disability."

With respect to the presumption of a grant of a right claimed which was always necessary, as I have already explained, to support prescription, the Commissioners say, "But we think the necessity of alleging the grant of an easement in pleading might in all cases be dispensed with. The right to an easement, generally speaking, is in truth acquired, not by any deed, but by the acquiescence for a given time of a party competent to interrupt the exercise of the right; and this is now in substance considered equivalent to a grant, though no grant be executed." This recommendation, it will be observed, only relates to the mode of pleading a claim to a prescriptive right; it does not affect the actual law, and as a matter of fact after the Prescription Act was passed it still remained as necessary to show the circumstances from which a grant might be presumed as it was before, except in those cases in which the Act declared the right to be "absolute and indefeasible."

It might have been supposed that after this inquiry and

\* From a Report by Mr. J. Leybourn Goddard, prepared by request of the Light and Air Committee of the Royal Institute of British Architects.



elaborate report the Government of the day would have acted upon it, and brought in Bills to carry the recommendations of the Commissioners into effect, but such does not appear to have been the case. The pages to which we naturally turn to see what was done in Parliament are those of Hansard, and there I find but a very scanty report of what took place, but certainly the Government took no steps in the matter. The great question of Reform was at the time occupying the attention of the Legislature and disturbing the mind of the country, and that may have been the reason why the Government did not take the subject up; but be it what it may, all the real property subjects seem to have fallen into the laps of the Lord Chief Justice of the King's Bench, Lord Tenterden, and Mr. Campbell; and we find the former as the introducer of the Prescription Bill in the House of Lords. At its introduction the Bill was not confined to profits *à prendre* and easements, as the Act was subsequently, but it contained also provisions relative to tithes and other matters. These provisions gave rise to some petitions and debates in Parliament, and they were ultimately separated from the rest of the Bill and became a distinct Act (2 & 3 William IV., c. 100). I do not find in Hansard that there was any debate whatever respecting the easement clauses of the Bill, nor that there was any petition respecting them. The only reported speeches about them appear to have been those made on the occasion of the first introduction of the Bill (for it was introduced three times) on March 15, 1831. Lord Tenterden then explained that the Bill was divided into parts, the first relating to profits, as rights of common, for which he proposed a period of sixty years for an indefeasible title, and thirty for a presumptive title; the second relating to easements, for which he proposed the periods of forty and twenty years; the third part relating to lights, for which he proposed the period of twenty years only; the fourth part relating to tithes; and the fifth to terms of years in conveyances. He said he had availed himself of the suggestions of the late Real Property Law Commission, when he thought them suitable for his purpose, and the Lord Chancellor expressed his great admiration at the able and luminous manner in which Lord Tenterden had brought the matter forward, and he spoke of the importance of the subjects.

It will be observed that Lord Tenterden made a difference between the easement of light and other easements. He did not explain the reason for the difference, and I do not find that the Royal Commissioners suggested that any difference should be made. The difference must have originated with Lord Tenterden, and he is reported to have said on the subject that "the third part relates to ancient lights and their obstruction. As to these also judges were often obliged to leave it to juries to presume that they were ancient lights. It was in his opinion preferable to fix the period of twenty years by law, for which period, if uninterruptedly enjoyed, they were to be secure from challenge, unless originally enjoyed by contract or agreement." He is not reported to have said anything about the ancient customs which the Act swept away, and the Bill seems ultimately to have passed through Parliament without any discussion or objection whatever, except on the subject of tithes. The Bill was brought in the first time on March 15, 1831, but the Parliament was dissolved before much progress had been made. It was re-introduced by Lord Tenterden on August 19, 1831, and reached the stage of Committee on September 22, and was then ordered to be reported; but Parliament being prorogued on October 20, the Bill seems to have progressed no further. It was introduced again in the Lords by Lord Tenterden on March 30, 1832, and became law on August 1 of that year, without, as far as I am aware, any discussion or amendment, except with reference to tithes and the terms of years in conveyancing which do not appear in the Act.

I can only suggest one reason why that remarkable difference, which is so considerable and of such importance, should have been made between rights to light and rights "to any way or other easement, or to any watercourse or the use of water," as the 2nd section of the Act has it. I explained that the law of prescription in theory depended upon the possibility of presuming a grant, but that in the case of light and air to a window it is not strictly speaking possible to presume a grant, as no grant is required to entitle a man to make a window in his own house, or to give him a right to the light and air which naturally will enter it. To defeat a claim to a right of way or water after twenty, but before forty years' user, it is still sufficient to show that no grant of the right could have been made. The words of the Act with regard to them are, that after twenty years' user they "shall not be defeated or destroyed by showing only that such way or other matter was first enjoyed at any time prior to such period of twenty years, but nevertheless such claim may be defeated in any other way by which the same is now liable to be defeated," which includes the showing of an impossibility of a grant having been made. This provision clearly could not be applied to light and air for which no grant is required, and for this cause I think it probable that the distinction was made by Lord Tenterden which places prescription to light after twenty years' enjoyment on the same footing as a prescription to ways and watercourses after user for forty years, and makes the right absolute and indefeasible.

I have now traced the history of the easements of light and air up to the time when that important Act which made such an altera-

tion in the law was passed, and the only part of my task that remains is to show the effect of the Act as it is illustrated by the subsequent decision of the courts. To comment upon all these decisions would be to write a book, and beyond the scope of this paper, but there are some in which leading principles have been discussed which therefore demand some attention.

The first thing to be noticed is that the third section of the Prescription Act mentions light only, and says nothing about rights to uninterrupted currents of air. Whether this was an oversight or not I am unable to say, but I am inclined to think that it was. It has been a question whether a right to air was not included in the expression "other easement" in the second section, but in the case of *Webb v. Bird*, which was a claim of right to wind for a windmill, it was decided that it was not, "for," said the judge, "it appears to me that this section was not intended to give a right after twenty years to every sort of enjoyment which may be classed under the general term easement, but that it was meant to apply only to the two descriptions of easement therein specified—viz., the right to a way or watercourse which may be enjoyed or derived 'upon, over, or from any land or water.' I do not think the passage 'of air over the land of another' was or could have been contemplated by the Legislature when forming that section." And in another place he adds, "The Legislature evidently considered the passage of light" (which, said the Master of the Rolls, in *Sturges v. Bridgman*, bears a very close analogy to that of air) "to stand upon a different footing from the other easements with which it had been dealing in the preceding section, and if it had intended to extend the right to the uninterrupted passage of wind and air it would have done so in express terms." It will be seen, therefore, that the law relating to light and that relating to air now stand upon an entirely different footing, though, as I remarked at the commencement of this paper, we commonly find in practice the two coupled together when a window is obstructed, as if the law was the same for both. It should, however, be added that, though the Prescription Act does not touch the subject of air, and though no right can be acquired at common law to have the air passing over an open space unobstructed, yet that a prescriptive right at common law to have the air accustomed to enter a window unobstructed has been recognised as law ever since the time of *Aldred's case*, in the reign of James I. Nevertheless, though an injunction may now be obtained without difficulty to stop the obstruction of light, it would require a strong case to induce the Court to restrain interference with a current of air to a window, unless the obstruction also hindered the access of light. Lord Selborne, as Chancellor, said that he has observed that in all class of cases a formula had crept into the pleadings, and from the pleadings had passed into evidence as to air as well as to light; but that the nature of the case which would have to be made for an injunction by reason of the obstruction of air was *toto calo* different from a case of light. Cases, he added, are very rare indeed, and must be very special, such as to involve danger to health, or something very nearly approaching to that, to justify the interference of the Court on the ground of the diminution of air.

I have already made some remarks upon the difference which was made in the Prescription Act between rights to ways and water and rights to light. Before leaving the subject altogether I think I ought to call more particular attention to the exact words of the sections relating to those rights respectively, and to the peculiar effect of the third section, as it was explained in a judgment of the late Lord Westbury in the House of Lords. That judgment is also worthy of attention, because the learned lord so clearly explained the nature of a right to light, and a popular error respecting it. The second section of the Act states that no claim which may be lawfully made at common law by custom, prescription, or grant to any way or other easement (which has been held to mean only any other easement in the nature of a way or right to water, though this limitation has recently been condemned by the Lord Chancellor in the great case of *Angus v. Dalton*, which relates to support for buildings), or to any watercourse, or the use of any water, when such way or other matter shall have been actually enjoyed by any person claiming right thereto without interruption for the full period of twenty years shall be defeated or destroyed by showing only that such way or other matter was first enjoyed at any time prior to such period of twenty years, but nevertheless such claim may be defeated in any other way by which the same is now liable to be defeated; and where such way or other matter shall have been so enjoyed as aforesaid for the full period of forty years, the right thereto shall be deemed absolute and indefeasible, unless it shall appear that the same was enjoyed by some consent or agreement expressly given or made for that purpose by deed or writing. The third section, which relates exclusively to light, says that when the access and use of light to and for any dwelling-house, workshop, or other building shall have been actually enjoyed therewith for the full period of twenty years without interruption, the right thereto shall be deemed absolute and indefeasible, any local usage or custom to the contrary notwithstanding, unless it shall appear that the same was enjoyed by some consent or agreement expressly made or given for that purpose by deed or writing.

I have already called attention to the fact that the Act places a claim to light after twenty years' enjoyment on the same footing as



a claim to a way or a right to water after forty years; this will be seen more clearly now that I have given the language of the sections. I have also explained the only reason which I can imagine for the difference, so that I have need to say nothing more on that point in this place. I therefore pass on to the important case of *Tapling v. Jones*, in which Lord Westbury, who was Chancellor, explained the nature of the easement of light since the Act, and the principles of law which now govern it. After reading the third section of the Act his lordship said that "it is material to observe, with reference to the present appeal, that the right to what is called 'an ancient light' now depends upon positive enactment. It is matter *juris positivi*, and does not require, and therefore ought not to be vested on any presumption of grant or fiction of a licence having been obtained from the adjoining proprietor. Written consent or agreement may be used for the purpose of accounting for the enjoyment of the servitude, and thereby preventing the title which would otherwise arise from uninterrupted user or possession during the requisite period. This observation is material, because I think it will be found that error in some decided cases has arisen from the fact of the courts treating the right as originating in a presumed grant or license. It must also be observed that after an enjoyment of an access of light for twenty years without interruption the right is declared by the statute to be absolute and indefeasible; and it would seem, therefore, that it cannot be lost or defeated by a subsequent temporary intermission of enjoyment, not amounting to abandonment. Moreover, this absolute and indefeasible right, which is the creation of the statute, is not subjected to any condition or qualification, nor is it made liable to be affected or prejudiced by any attempt to extend the access or use of light beyond that which, having been enjoyed uninterruptedly during the required period, is declared to be not liable to be defeated. Before dealing with the present appeal, it may be useful to point out some expressions which are found in the decided cases, and which seem to have a tendency to mislead. One of these expressions is the phrase "right to obstruct. If my adjoining neighbour builds upon his land, and opens numerous windows which look over my gardens or my pleasure-grounds, I do not acquire from this act of my neighbour any new or other right than I before possessed. I have simply the same right that I before possessed. I have simply the same right of building or raising any erection I please on my own land, unless the right has been by some antecedent matter either lost or impaired, and I gain no new or enlarged right by the act of my neighbour. Again, there is another form of words which is often found in the cases on this subject, namely, the phrase "invasion of privacy by opening windows." That is not treated by the law as a wrong for which any remedy is given. "If A be the owner of beautiful gardens and pleasure-grounds, and B is the owner of an adjoining piece of land, B may build upon it a manufactory with a hundred windows overlooking the pleasure-grounds, and A has neither more nor less than the right which he previously had of erecting on his land a building of such height and extent as will shut up the windows of the newly-erected manufactory." The learned lord then proceeded to apply these principles to the case before the House, which related to the effect on ancient lights of opening new windows and increasing the size of the old ones, which is beside the purpose of this paper.

The only other point to notice with regard to the third section of the Act is the power of acquiring right to light, "any local usage or custom to the contrary notwithstanding." This provision had the effect of abolishing an ancient custom in the cities of London and York, and possibly in some other towns, whereby any person possessed of an ancient foundation was at liberty to rebuild on that foundation to any height, notwithstanding that the effect of raising the height of the building above the old level was to obstruct the light accustomed to enter a neighbour's ancient window. The custom is mentioned in several old cases, as *Aldred's case*, *Hughes v. Keene*, *Ryder v. Bentham*, and *Wynstanley v. Lee*; but I do not find it referred to in the report of the Real Property Commissioners, nor in Hansard's report of the proceedings in Parliament. It was held that the Act had abolished the custom in the cases of the *Salters' Company v. Jay*, and *Truscott v. Merchant Taylors' Company*.

**Carlisle.**—The Carlisle and Cumberland Banking Company, Limited, are making extensive alterations to the bank premises in Devonshire Street, which were formerly occupied by Messrs. Mackie, Davidson & Mackie. The ground floor is being transformed into shops and the upper floors into offices, with accommodation for caretaker, &c. The contractor for the whole of the works is Mr. Thomas Milburn of Carlisle, and the architect is Mr. George Dale Oliver, of Carlisle and Workington.—The Drill Hall of the 1st Cumberland Rifle Volunteers is to have a new roof, owing to the old wooden one being in a dangerous condition. Mr. George Dale Oliver, architect, of Carlisle and Workington, has been appointed to replace it, and he has decided to substitute one of iron which, with an increased height of walls and other minor improvements, will greatly add to its stability and appearance. The tender of Messrs. Pratchitt Bros. has been accepted for the ironwork, and that of Messrs. Davidson for the rest of the works.

## THE CASTLE OF PHAROS.

ONE of the buildings destroyed at Alexandria was the castle of the Pharos, which was practically the only specimen of Arab mediæval architecture in the city. It stood on the site of the celebrated lighthouse, by the ancient name of which it was still commonly known. Mr. H. C. Kay says that being at Alexandria in the spring of last year, he desired to visit the building, and was fortunate enough to obtain a permission to do so, which for a long time past has been rarely granted. His object, apart from motives of interest in the old building itself, was to ascertain, if possible, whether any signs could be discerned of its having been erected on the actual foundations of its more ancient and renowned predecessor. Mr. Kay's inspection was necessarily a very superficial one, but as far as it could go it confirmed him in the belief that some such indications are actually to be detected, and he noticed in particular a spot, near one of the corners of the building, where the wall could be perceived to run in a direction not widely but distinctly different from that of the presumably original foundation, with which it formed a gradually divergent angle. The Pharos was still in existence in A.D. 1326. It became a complete ruin between that date and A.D. 1349. The present building was erected by the Egyptian Sultan Kait-Bay, who reigned from A.D. 1468 to 1496. It may readily be presumed that, according to the uniform practice of the East, the ground continued until that time encumbered with the ruins of its predecessor. The name and titles of Kait-Bay were imperfectly but unmistakably legible on one of two much-decayed limestone tablets over the entrance gate. The latter was roughly formed by three massive blocks of granite, two of which, standing erect, served as jambs on either side, with the third forming a lintel across the top, the whole presenting a peculiarly Egyptian appearance. A wide passage, turning at an abrupt right angle to the left, gave access to a small mosque, consisting of a hypæthral court, with four arched recesses, one of which contained the kiblah and pulpit. The slight deviation of the walls of the castle from the lines of the ancient foundations may possibly have been made for the express purpose of placing the mosque in the true line of direction towards Mecca.

The mosque composed but a very small portion of the building. The remainder, rising one storey above the other, was occupied by innumerable rooms of various sizes, opening out of long and narrow passages, all empty and for many years apparently disused. Mr. Kay was informed that it was capable of lodging 5,000 men—a statement which was probably not exaggerated. The quarters intended for the commander and other superior officers were easily distinguishable by their superior look, and by some scanty remains of decoration and of ancient mosaic flooring of coloured marbles.

On the flat roof rose a somewhat ruinous minaret, the upper portion of which had disappeared, but which contributed much to the picturesqueness of the massive square building, which, with its rounded towers at each of its four angles, formed so conspicuous a feature in the view of Alexandria, on its eastern side, both from the land and from the sea.

It is, of course, highly improbable that the castle will be rebuilt. We must, on the contrary, expected that its shattered fragments will speedily be removed. But it is to be desired that this may not be done without the presence of some competent person, able to ascertain, with some degree of precision, whether anything be really still in existence of the last remains of the widely-celebrated monument that once stood upon the spot.

## PROTECTION OF ANCIENT MONUMENTS.

THE President of the Devonshire Association in the course of his address called attention to this subject. He said: In February, 1869 the Office of Works requested the Society of Antiquaries to furnish "a list of such regal and other historical tombs or monuments existing in cathedrals, churches, and other public places and buildings, as in their opinion it would be desirable to place under the protection and supervision of the Government, with a view to their proper custody and preservation." A committee was appointed by the Society, and three years after this committee made a report, which in June 1872 was published as a Blue Book. Out of all the historical tombs in this county, the committee thought proper to recommend the proper custody and preservation of seventeen only. With the issue of the Blue Book the matter ended, and we have heard nothing of Government preservation of regal and historical tombs since. But it is a matter that deserves serious attention, and I would suggest that at the visitations of bishops, archdeacons, and rural deacons enquiry should be made, not only as to the state of the vestments, books, and church plate, but also as to the state and condition of the monuments and tablets in the various churches, and that those officials should receive suggestions for the better care and preservation of such silent witnesses to the commemorated dead. In the same year (1869) a really successful effort was made. A Royal Commission was issued, the result of which has been the publication of the eight volumes of Reports of the Historical Manuscripts Commission. Owners of documents readily placed their stores at



the disposal of the officers of the Commissioners for examination, and the result has been to open up a mine of literary wealth to the historical student. We have in Devonshire a place which has long been one of interest. It is true that Dartmoor has no circle to compare with Stonehenge, or anything to rival the alignments of Carnac; but it has within a small area ancient remains of the greatest value, and barrows, circles with avenues, dolmens and menhirs, are very accessible, and can be examined under conditions more favourable for study than in perhaps any other locality. Any attempt, therefore, to preserve these must excite our warmest approval. Perhaps no class of ancient remains are so exposed to destruction as the rude stone monuments, the camps, dykes, and earthworks of the early inhabitants of this country. Some of these have, from their size and remoteness from the haunts of men, been preserved so far; but every day, as the encroachments of the agriculturist and the builder become more bold, these are, if not actually destroyed—as, unfortunately, has been the case in many instances—seriously threatened. The preservation of these has been an anxious care on the part of many antiquaries; but all that they were able to do was to endeavour to create a wholesome public feeling in their behalf. But something more than this was required. Legislative powers were necessary in order to deal with the safety of these valuable remains in a proper way, and therefore, when Sir John Lubbock announced his intention of bringing before Parliament a Bill having for its object the preservation and care of ancient monuments, all antiquaries hailed the news with delight. So far, however (and Mr. Rowe traced the history of the efforts made to pass the Bill through Parliament), no success had been attained. In spite of the efforts of those who know the value of these monuments best, they are left without care, exposed to the ravages of the spoiler and the caprice of the Philistine. We have an interest, second perhaps to those living in no other locality, in the passing of such a measure as that to which I have been referring. It is much to be desired that no time should be lost in endeavouring at all events to preserve what few remains are still left to us; for it cannot be doubted but that those that remain bear but a very small proportion to those that are altogether lost. It seems to me that these things stand on a very different footing from any other remains of antiquity. While books, monuments and manuscripts for various reasons have their friends interested in their preservation, these prehistoric monuments have but few, and the supposed exigencies of agriculture, or the necessities of the farmer, joined to the remoteness of the localities in which they are for the most part situated, present opportunities for interfering with them.

#### ARCHITECTS AND QUANTITIES.

A LETTER from Mr. R. M. Phipson, F.S.A., appears in the *Norwich Mercury*, in which he says:—It is perfectly clear to the mind of every right-thinking man that the architect of the Norwich School Board has done nothing but what he was properly and fairly entitled to do under his agreement with the Board, and that his actions from the first have been most straightforward and aboveboard. No one who knows him could ever have supposed differently. But I must object to its going forth that it is the “invariable rule in the provinces for architects to supply builders,” and “that no builder would contract unless he were supplied by the architect with the quantities.” I know of several professional men who do nothing of the kind, and I can say for myself that during the thirty-four years that I have been in practice I have never on any occasion supplied builders with quantities. Yet I have never failed to get plenty of competition for all my works.

The insinuation that “surveyors who get out quantities make an allowance to the architect by private arrangement” is unworthy of Mr. Brown, and is, in my opinion, utterly contrary to fact. At any rate, I have never been offered it, and if such a proposal had been made, the surveyor would have left my office rather more quickly than he entered it. In the case of the Norwich City Asylum the surveyors charged 1½ per cent. for their work, and this was paid to them direct by the Corporation, who agreed to it, by their committee, beforehand. Apart from the fact that a money payment to an architect from a builder employed under him being in itself objectionable, there are other and far more cogent reasons why architects should not supply builders with quantities. Into these reasons this is not the proper place to enter. I will simply observe that it is the sole duty of an architect to his employer to see that his plans and specifications are carried out in their integrity, and when he steps beyond this he is running the risk of placing himself in a false position. The Royal Institute of British Architects, to which I have belonged since 1850 (and have had the honour of serving on the Council of that body), state in their printed instructions regulating professional practice and charges, “It is not desirable that an architect should supply to builders quantities, but in case of such being done it should be with the concurrence of the employer, and the architect should be paid by him, and not by the builder.” The Norwich School Board would appear to me by their arrangements “to spare at the spigot and let out at the bung-hole.”

#### DR. JAMES FERGUSSON, LL.D.

ON Tuesday last the degree of LL.D. was conferred by the University of Edinburgh on Mr. James Fergusson, the author of many books on architecture. In presenting Mr. Fergusson the Dean of the Faculty of Law said:—I have the honour to present to you, my Lord Chancellor, for the degree of Doctor of Laws, Mr. James Fergusson, Doctor of Civil Law, and Fellow of the Royal Society, the distinguished historian of architecture, whom the Senatus Academicus of the University of Edinburgh have deemed eminently worthy of this distinction. Born at Ayr, and partly educated in the High School of Edinburgh and partly in England, Mr. Fergusson afterwards went to India, and was there engaged in mercantile pursuits. But after a few years he abandoned these for the more congenial study of art and architecture. Not only among architects, civil and military, but among all lovers of art—and, indeed, among all persons of culture where the English language is spoken—Mr. Fergusson's name is a household word. In the year 1845, and several previous years, he travelled very extensively in India, and in many other countries, for the purpose of studying various styles of architecture. The results of those studies and unwearied researches have been very numerous and very valuable. First upon the list, I may mention Mr. Fergusson's very distinguished work upon “The Rock-cut Temples of India,” the standard work on the subject, published in 1845, and illustrated by himself. Mr. Fergusson being a distinguished draughtsman as well as a most accurate observer, next published in the same field of Indian architecture a valuable work entitled “Picturesque Illustrations of Ancient Architecture in Hindostan.” Under this head of Indian architecture must also be mentioned a very magnificent work entitled “On Tree and Serpent Worship,” being illustrations from the famous Buddhist worship in India, published at the expense of the Indian Government in 1868. To a second category belong Mr. Fergusson's studies in the field of Jewish architecture. In 1847 and in 1865 Mr. Fergusson published two works of great value and interest upon the topography of Jerusalem and upon the site and dimensions of the ancient temple of the Tabernacle; and in 1878, in the same category, he published a valuable work on Jewish temples. Then there is a third category, which also must be mentioned. Mr. Fergusson has thrown very much, and a useful, light upon the subject of Assyrian and Persian architecture. His work upon the ancient palaces of Nineveh and Persepolis is famous. It was published in 1851, and I may mention that he was subsequently appointed architect of the well-known and beautiful Nineveh Court in the Crystal Palace of Sydenham. To a fourth category belongs the standard work on Greek architecture—namely, the account of the mausoleum of Halicarnassus, published by Mr. Fergusson in 1855, being an account of the far-famed tomb of King Mausolus of Caria. In the fifth place, Mr. Fergusson's distinguished architectural researches may be said to have culminated in several works in the field of comparative architecture. The first of this series was his well-known “Handbook of Architecture,” published in 1858, which was followed in 1862 by “A History of Modern Architecture.” These two works were afterwards amalgamated and re-issued in the form of “A History of Architecture in all Times and in all Countries”—a magnificent work, the standard work on the subject, with which we are all familiar, which was re-edited so recently as 1875. There is also a sixth category which must be mentioned. Mr. Fergusson is also one of the foremost authorities of the age on the very interesting and important subject of military architecture or military engineering. So far back as 1849 Mr. Fergusson published a most valuable essay upon the then entirely new system of fortifications or defences by means of earthworks, a system which was afterwards adopted by the Russians at Sebastopol, by the Americans during their civil war, and subsequently, I think I may say, by all the great military nations of the world. In connection with his great distinction in this province Mr. Fergusson has, since 1859, acted as one of the Commissioners appointed by her Majesty the Queen to superintend our national coast defences. Lastly, but perhaps not least, must be mentioned Mr. Fergusson's distinguished labours as a natural philosopher. Within the last few years Mr. Fergusson has published a most valuable work upon the descent and oscillations of rivers, of which I need only say that it is a standard work upon this subject. Among many other distinctions I must mention the gold medal with which Mr. Fergusson was presented in 1871 at a great meeting of the Institute of British Architects, presented to him, with the approval of her Majesty the Queen, as being the foremost living British authority upon the subject of architecture. On these grounds I ask your lordship to confer upon Mr. Fergusson the degree of Doctor of Laws, of which he is pre-eminently worthy.

The Silicated Carbon Filter Company, of Battersea, are sending in, under a contract with the War Office, a further 5,000 silicated carbon pocket filters, similar to those used in the Ashantee and Cape wars. The carbon is enclosed in a china cell for protection, and the filter will be better fitted to stand rough usage. The same Company are also supplying a number of silicated carbon ambulance filters, of the pattern approved of by the Army Medical Department.



## NOTES AND COMMENTS.

THE interior of the Hôtel de Ville, Paris, which was transformed for the late *fête* and inauguration ceremony, has again changed its aspect. Men are engaged in removing all the temporary decorations, and the work of completion, which has been interrupted for many weeks, will be recommenced with energy. The artificial ceiling of the banqueting-hall, painted on canvas by M. LAVESTRE, will be recopied by the artist for that apartment when completed, and many other of the temporary decorations have been found so effective that they will be reproduced for the finished building.

THE ten competitors in the final stage for the Grands Prix de Rome (Section of Sculpture) quitted the *loges* on Thursday, the 27th ult., after seventy-two days' seclusion, and their works have been on view for four days in the Salle Melpomène at the Ecole des Beaux-Arts. The artists were MM. VERLET, QUINTON, FERRARI, PEPIN, LOMBARD, ROUBLEAU (all pupils of M. CAVELIER), CHAVAILLAUD (pupil of MM. JOUFFROY and ROMBEAUD), HANNAUX and PÈNE (pupils of MM. DUMONT and BONNASSIEUX), and GASQ (pupil of MM. JOUFFROY and HIOLE). This year's subject was a full-length figure of *Sz. Sebastian pierced with Arrows*, and it is remarkable that all the prizes in the competition should have been carried off by pupils of M. CAVELIER—viz., the first grand prize by M. FERRARI, and the two second prizes by MM. PEPIN and LOMBARD.

IN the Painting Section (subject, *The Maccabees*) the first grand prize was awarded to M. GUSTAVE POPELIN, pupil of MM. GIRAUD and FERRIER, while the two second prizes fell to members of M. CABANEL's studio—MM. HENRI PINTA and PAUL LEROY. The jury was composed of members of the Painting Section of the Académie des Beaux-Arts, assisted as usual by six artists chosen from without the Institute.

AFTER one hundred and ten days' work on a palace for the Conseil d'Etat, the competitors in the Architectural Section left their rooms on the 1st inst. The models and plans will be on view in the Salle Melpomène until Sunday next, and the jury's decision issued on Saturday, the 5th.

ON Monday Pollok House, the picturesque mansion of Sir HEW CRAWFURD POLLOK, at Newtownmearns, near Glasgow, was destroyed by fire. The building was erected about 200 years ago. It was originally oblong on plan, measuring 70 feet in length by 30 feet in width. About 1856 a northern wing was added to it by the present baronet's father. The mansion was four storeys in height, and bore some of the characteristic features of a baronial residence of the sixteenth century. The windows in the upper flats were finished above with pediments, on which were carved the arms and monogram of the POLLOK family. The principal entrance to the building was from the south, and was approached by a handsome staircase with stone balustrades. In front of the main elevation was a spacious courtyard, bounded by high, old-fashioned walls, through which there were several entrances, flanked by carved stone representations of elephants and greyhounds—supporters of the CRAWFURD-POLLOK arms.

A MEMORIAL to the Board of Trade respecting the proposed tidal canal from Liverpool has been adopted by the Salford Corporation. It states that the Corporation had heard with great satisfaction of the proposed scheme for rendering the Mersey and the Irwell navigable to Manchester for vessels of large tonnage, and that they believed such tidal navigation would contribute to prevent the serious floods caused by the overflow of the Irwell—an evil they had been anxiously considering for some years. The Corporation suggest that by the Liverpool Water Act, 1880, the Board of Trade were authorised to determine at what depth the aqueduct from the Vyrnwy to Liverpool should cross the Mersey, so that it should not interfere with the present or any proposed improvement of the navigation. The Corporation ask that the Board would take care that the aqueduct would not be an obstruction. The object of the memorial is to checkmate the Liverpool Corporation, should the latter endeavour to utilise the Water Act as a means of impeding the project.

THE Glasgow Town Council have at length agreed to exhibit the ten designs lodged in the final competition for the Municipal Buildings; but as the time is only from the 4th to the 10th inst. it is hardly sufficient to allow an opportunity to competitors from a distance to examine the designs. The Buildings Committee have also recommended the Council to co-operate to some extent with the Glasgow Institute of Architects in furthering the proposed exhibition of the rejected designs. In other words, the Corporation Galleries or the City Hall will be lent for a fortnight without charge. Whether the exhibition is representative or not will consequently depend upon the competitors themselves. Many architects shrink from owning that they have failed, and consequently are opposed to exhibitions of rejected designs. But this case is peculiar, for it has not yet been made apparent on what grounds the selection was made. It is possible that many excellent designs were invalidated on account of some trivial informality. It should be borne in mind that the Glasgow Institute is undertaking the trouble and responsibility of this exhibition entirely because it is thought that the interests of the profession demand it, and because the Institute has been appealed to by architects in all parts of the country. It acts as an impartial professional society, not as a body of unsuccessful competitors.

SEVERAL important changes have lately been made in the management of the French national museums. M. DE RONCHAUD, administrator of the Louvre, and originator of the scheme for a new school of art in connection with that museum, has been nominated Director-in-Chief of the National Collections, and of the proposed school, which is to be opened forthwith. It is further announced that a decree of the President of the Republic dealing with the organisation of the new establishment is in course of preparation, and will shortly be promulgated.

IRELAND is said to possess almost every kind of stone; nevertheless the Dublin Corporation cannot obtain from an Irish quarry materials to pave the streets of the city. There was a time when pebbles of native limestone were used, and in consequence a large outlay on scavenging was necessary. But the members of the Corporation are now more economical, although they are eager to patronise their countrymen. In the contract-deed for the Dublin paving it was stipulated that Irish stone should be used whenever practicable. The English contractor loyally accepted the clause, but without much profit to himself. He says that none of the Irish setts were dressed in a satisfactory manner, and that Irish orders placed for immediate delivery have not come forward for months afterwards. Yet it appears that there are quarries of granite that would supply half the cities of Europe within a few miles of Dublin.

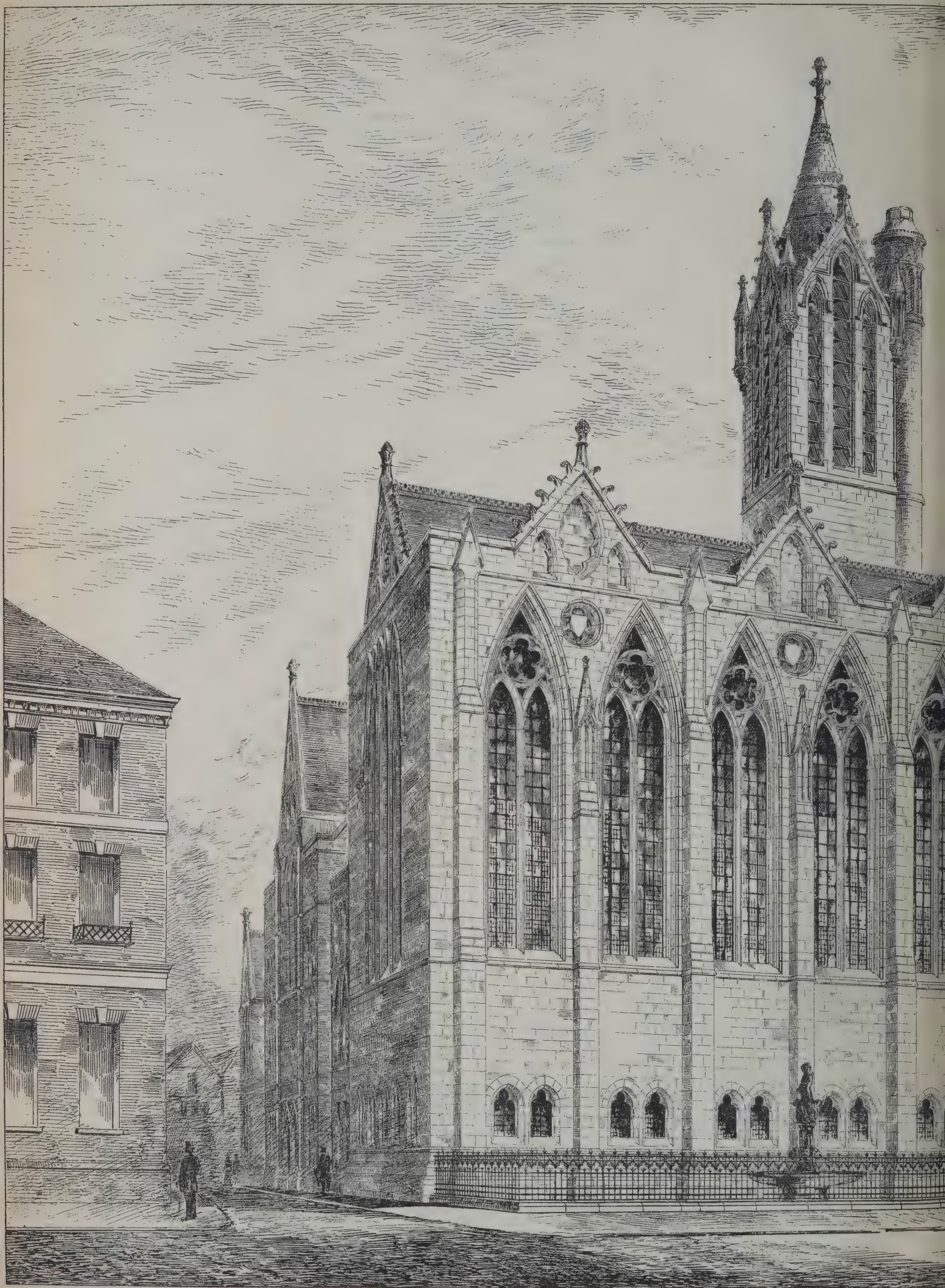
M. LÉONCE CHABRY, a painter of considerable reputation, has just died at Brussels. Born at Bordeaux, where he studied under LÉO DROUYN, he afterwards came up to Paris and passed through the studios of ROUSSEAU, TROYON, and several other famous masters of landscape. For many years works by the deceased artist have regularly appeared at the Paris Salon, where last year he obtained a medal.

THE forthcoming exhibition at the Palais de l'Industrie in Paris will be on a larger scale than was originally contemplated. Many of the Paris amateurs have combined to send specimens of old artistic furniture and tapestry. The Comte PILLET-WILL has lent his famous fifteenth-century *retables*, and the Vicomtesse JANZÉ is fitting up a small salon with old furniture and hangings of priceless value. Numerous bibliophiles are arranging the cabinets that will contain their works and manuscripts. On Saturday last a van bearing the familiar royal crown and cypher, with the inscription "On Her Majesty's Service," traversed Paris from the Northern Railway Station to the Palais, bringing a number of art objects which had been lent by the authorities of the South Kensington Museum. The various Ministries have agreed to lend their treasures of antique furniture, certainly the richest possessed by any Government in the world, on the sole condition that the Union Centrale replaces them temporarily by ordinary modern furniture. The exhibition will occupy the whole nave and ground-floor of the vast building, as well as the first-floor galleries lately taken up by the Salon.



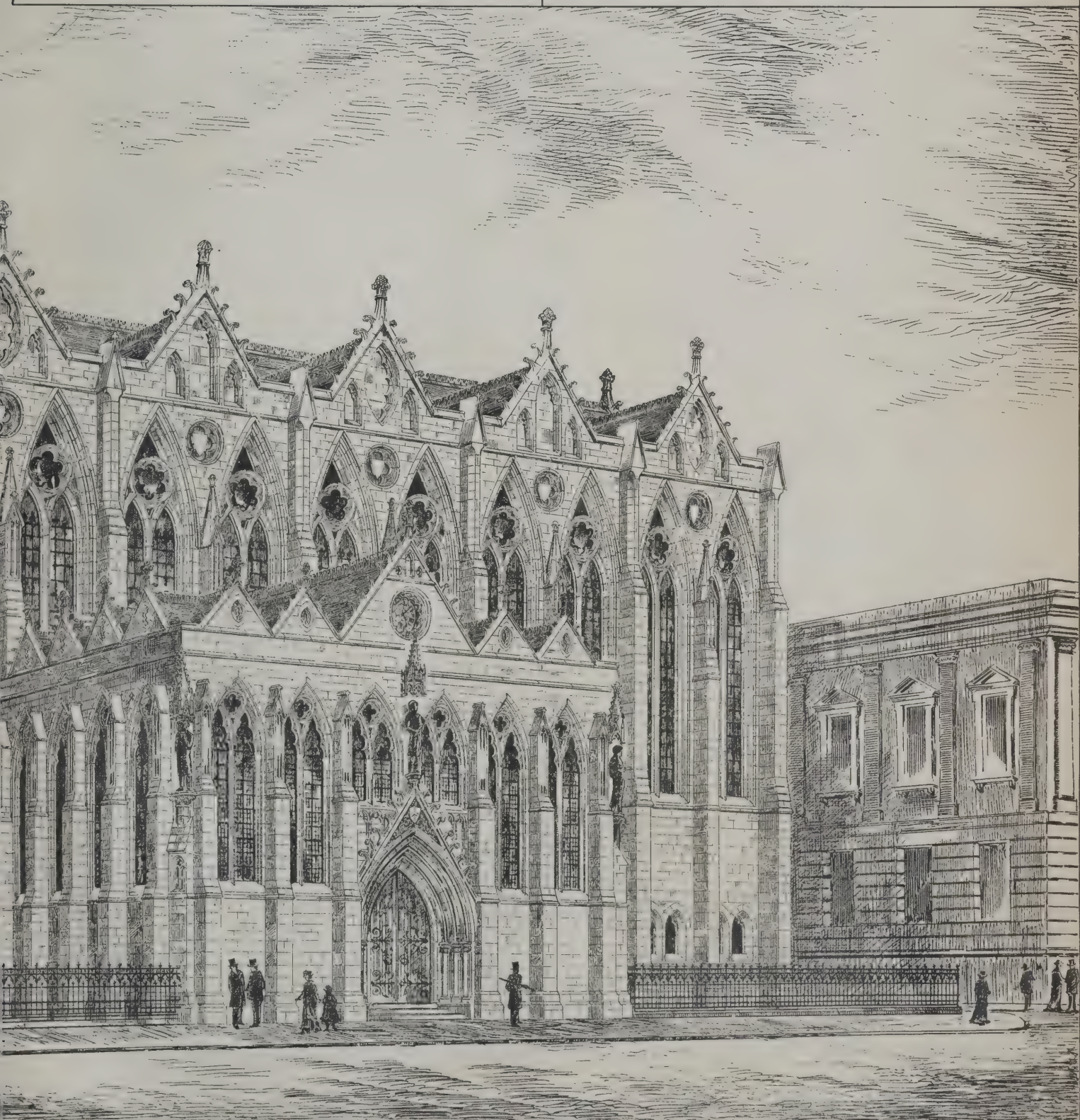






DESIGN FOR THE PUBLIC  
BY SYDNEY





BUILDINGS, MIDDLESBOROUGH.  
ER, A.R.I.B.A.













ACCEPTED DESIGN FOR THE PUE  
BY G G HOS



Aug 5<sup>th</sup> 1882.



C. BUILDINGS, MIDDLESBOROUGH.

IS, F.R.I.B.A

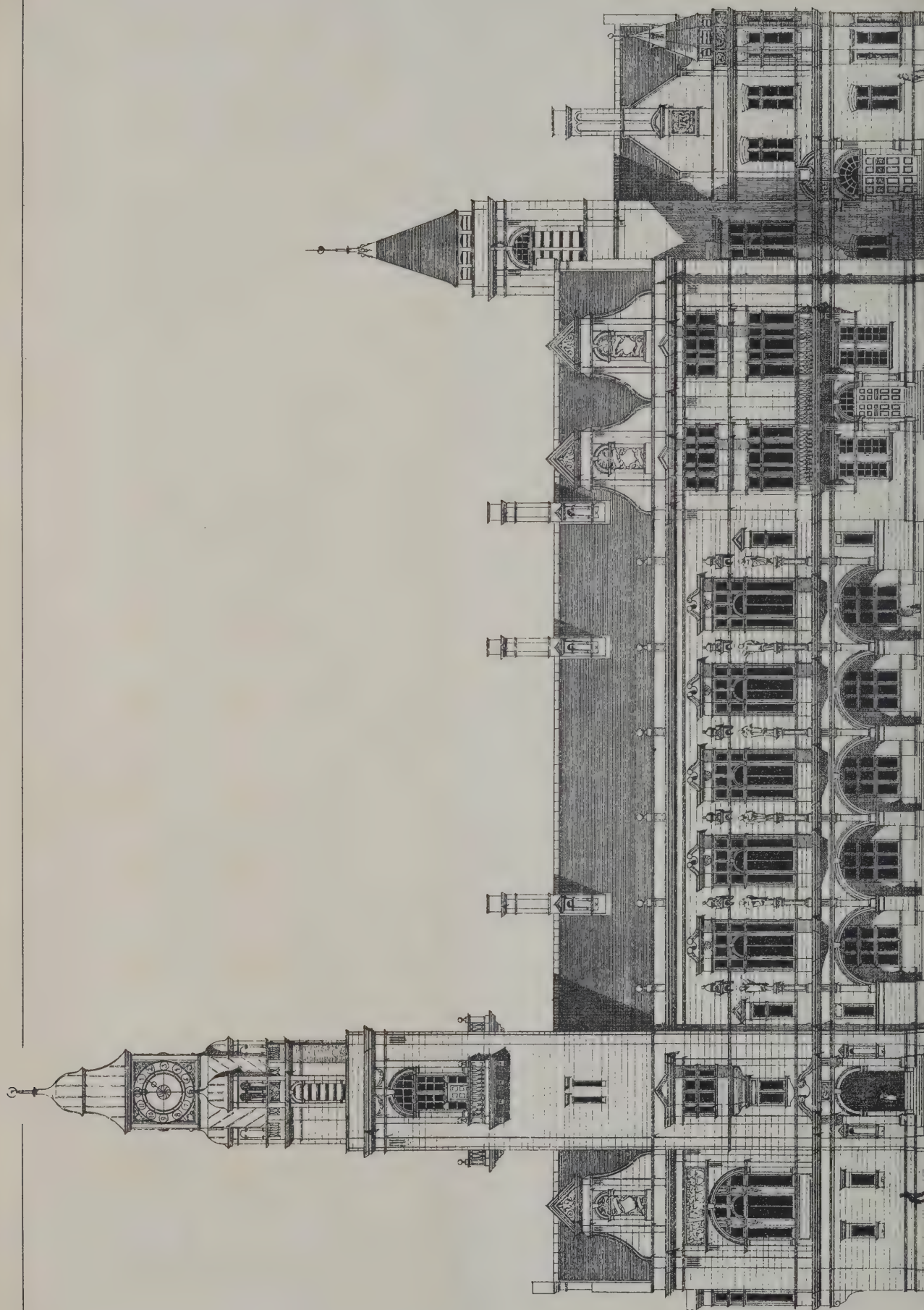












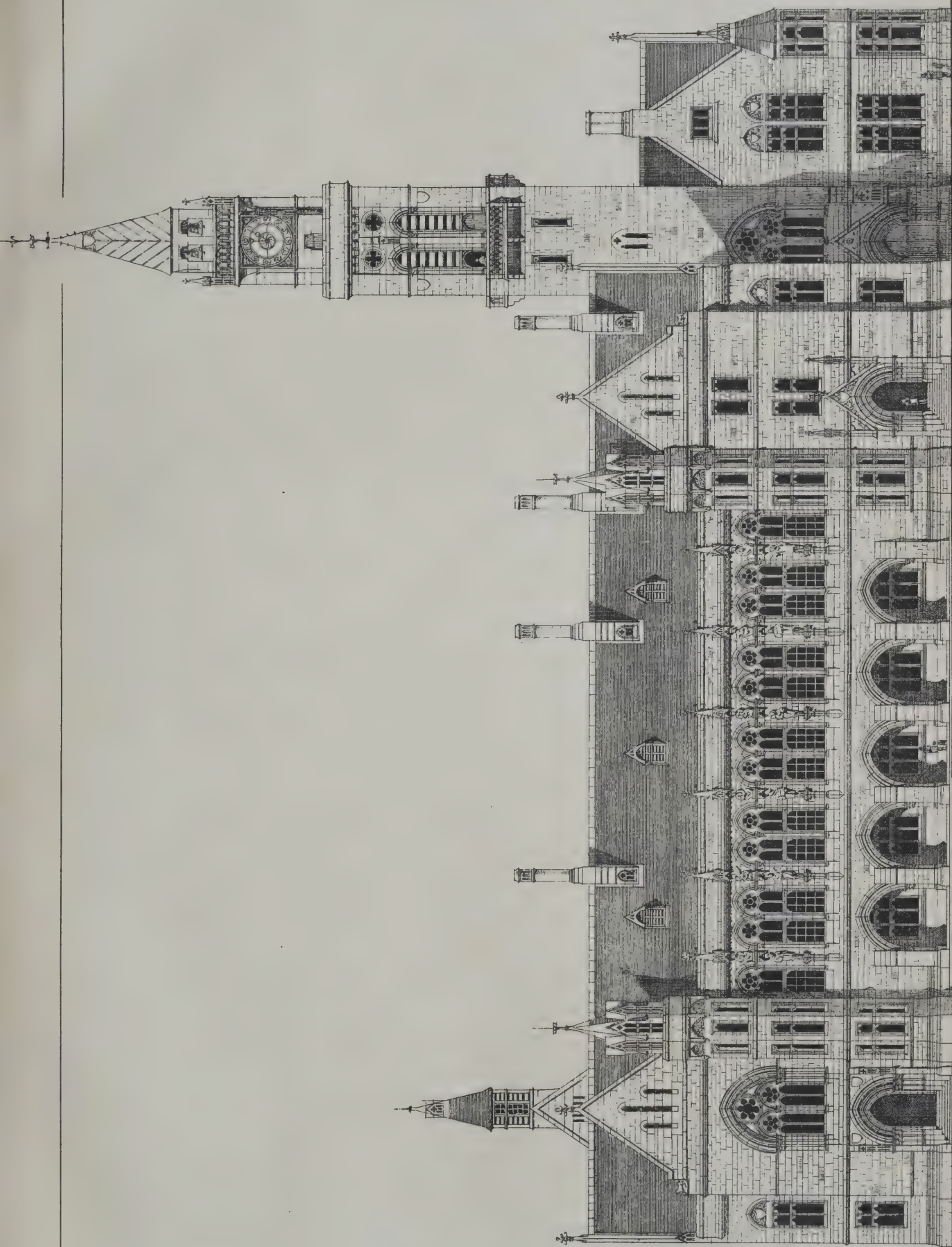
Entrance to Assembly Room.

Principal Entrance

Entrance to Free Library & Reading Room.

DESIGN FOR PUBLIC BUILDINGS, LEAMINGTON  
BY R. KNILL FREEMAN.





entrance to the  
Library and Museum

entrance to the  
Municipal Offices

entrance to the  
Assembly Room

DESIGN FOR PUBLIC BUILDINGS, LEAMINGTON  
BY R. KNILL FREEMAN.

Printed by J. W. Smith, 1, Old Bailey, London, E.C.







## ILLUSTRATIONS.

ACCEPTED DESIGN FOR THE PUBLIC BUILDINGS, MIDDLESBROUGH.

THIS week we publish the design by Mr. G. G. HOSKINS, F.R.I.B.A., which was submitted under the motto "Law and Order," and to which the first prize was awarded on the report of Mr. WATERHOUSE, A.R.A. The view shows the fronts to Corporation Road and Albert Road.

In the description accompanying his design Mr. HOSKINS said that it was his endeavour to obtain compactness, airiness, thorough ventilation, and good lighting and heating arrangements, together with such perfect classification and concentration of departments as to ensure complete supervision for the heads of each department, and afford every facility to the various officials for the transaction of the business of the borough, and provide amply for the convenience of the public. One particular feature of the planning is the quadrangle, the practical advantages of which over the usual method of providing a number of small useless courtyards for the purpose of lighting and ventilation cannot be over-estimated. In this case the quadrangle also serves as a means of direct communication between the various departments, as a drill-ground for the police and fire-brigade, as washing and cleaning yard, and for other purposes. It is approached by archways on the east and west sides, which will afford ample egress for the fire-engine and a large concourse of people.

The Town Hall is situated at the north end of the site, and consists of a large hall measuring 118 feet by 60 feet. This hall is lighted by eight two-light windows on the north and south elevations; and on the north or principal façade towards Corporation Road five sculptured figures, representing Art, Science, Commerce, Music, and Literature, are introduced. The floor of the hall is composed of Messrs. DENNETT & INGLE's fire-proof construction, with wooden floor above; and below the hall is a covered space of the same size, which may be utilised in wet weather for the parade or drill of the police, and also as a shelter for large audiences waiting for their carriages after leaving assemblies and meetings in the Town Hall. The DENNETT system is adopted not only as a protection against fire, but to obviate the necessity of columns, which would considerably interfere with the drilling of the police. At the west end of the building are situated, on the semi-basement plan, a heating chamber, 20 feet by 16 feet 3 inches; refreshment-room stores, 20 feet by 16 feet 3 inches; coal-cellar and urinals, with staircases rising to the body of the hall; dress balcony, and gallery; the space used for urinals being the lowest storey of the tower. The tower as it rises affords the following accommodation:—On the ground-floor the vestibule giving upon the body of the great hall; on the first-floor a like vestibule, from which access is given to the smoking-room, refreshment-room, bar, and south staircase; and above these the weight-chamber, bell-chamber, and dial-chamber, in connection with the clock. At the end of this portion of the building are placed, on the semi-basement floor, ladies' and gentlemen's dressing-rooms, measuring 20 feet by 16 feet 3 inches respectively, property-room, entrance lobbies, staircases up to platform, lavatories, coal-houses, water-closets, &c. On the ground-floor two committee-rooms, each measuring 22 feet by 20 feet, organ-chamber, platform, and staircases in connection with the same. On the first floor, two committee rooms, each measuring 28 feet by 20 feet, with staircase thereto; also main landing and external balcony, from which may be delivered speeches, declarations of the poll, &c., to the public. The sculptured figure upon the apex of gable to main west entrance represents St. GEORGE. To the south of this Town Hall block, extending the full length east and west of same, is a covered carriage-way, with a glass-roof glazed on RENDLE's system. This carriage-way makes a strong line of demarcation between the Town Hall proper and the rest of the building; and under this arrangement it would be easy to build the Town Hall block at a later date, if such an idea were entertained, without in the least way interfering with the remainder of the buildings.

The police department is situated about midway of the site, with its principal elevation towards Dunning Street. On the ground-floor are the main entrances from Dunning Street to the Police Court and police offices; over the former of which is introduced a sculptured figure representing Justice. Here is provided the Police Court, 55 feet by 40 feet. The houses of Chief Constable and Superintendent of Fire Brigade are amalgamated, although thoroughly distinct and separate in

their arrangements, within the block of buildings immediately to the south of the archway between Dunning Street and the quadrangle. A considerable portion of the accommodation for Fire Brigade is situated above the basement, and the offices of the Inspector of Nuisances and the Inspectors of Weights and Measures is situated in the semi-detached basement, and above is the auditor and cashier's office. Other rooms for the use of town officials are conveniently situated. Situated in the very centre of the Russell Street façade is a Council Chamber measuring 55 feet by 35 feet, to the north of which, and looking on to the large quadrangle, is a committee-room 36 feet by 21 feet, well lighted by two 2-light windows and one oriel window. From these windows may be witnessed in fine weather the drilling of the police and the exercise of the Fire Brigade. To the west of the Council Chamber is another committee-room, 27 feet by 18 feet 3 inches. Adjoining these several apartments are spacious main landing and vestibules which give approach to the lavatories, &c. The remainder of the space is devoted to the principal staircases east and west. Immediately below the Council Chamber is the School Board Department. The Free Library is situated at the extreme south-west angle of the site. The principal room measures 60 feet by 40 feet; and, amongst other provisions, is a writing-room for the benefit of members making reference to works. Adjoining the Free Library on the north and on the Albert Road façade are situated the Guardians' offices; and the offices of the Water Board are between the archway at the north end of the Poor Law Guardians' offices and the west end of the covered carriage drive.

The heating and ventilating arrangements have been devised with care; and it is proposed to concentrate nearly the whole of the principal drains in one focus—namely, a large and well-trapped tank or manhole in the centre of the quadrangle, from which 12-inch main trunk drain outlets will be run.

## DESIGN FOR THE PUBLIC BUILDINGS, MIDDLESBROUGH.

WE publish also the design sent in by Mr. SYDNEY VACHER, A.R.I.B.A., of 9 Argyll Street, W. The instructions for the competition were concise, yet full of detail. It was stated that the four main departments were to be placed one in each of the sides of the site, and that every department of the municipality was to have a separate entrance from the street. The Town Hall was to hold 3,500 people, and be placed in the front of site; the Police Court and Fire Brigade on one side of site; the Free Library and several boards on the other, the Council Chamber and departments connected with it at the other end of the site.

It was remarkable that all the premiated designs had small halls, and could hardly accommodate with comfort the number stipulated—viz., 3,500. This design was set aside on the ground that the requisite accommodation was not provided, as the author had forgotten to send an attic-plan showing the policemen's, firemen's, and one or two other suites of rooms, although he had written on the elevation the spot where they came. It was also objected that he had provided internal communication between the different departments, which had not been asked for, and was not required.

## DESIGNS FOR THE PUBLIC BUILDINGS, LEAMINGTON.

IN the competition for the Public Buildings at Leamington two designs were submitted by Mr. FREEMAN, of Bolton, which are now reproduced. One of them found much favour with the Corporation.

## LIVERPOOL ARCHITECTURAL SOCIETY.

BY invitation of Mr. J. C. Edwards, a number of the members of the Liverpool Architectural Society paid a visit to the Pen-y-bont Terra-cotta Works at Ruabon on Wednesday, July 26. They were conducted over the works by Mr. J. C. Edwards, Mr. E. Lloyd Edwards, Mr. Richardson (chief of the Designing Department), and Mr. Bryan (general manager), who thoroughly explained the successive stages of manufacture. Commencing with the clay-getting, the party were conducted first to the huge pit from which the clay is obtained, and where clay-getting in its various forms was in operation: *en passant* it may be said that the stock of clay is practically illimitable. Thence they were taken to the grinding and pugging mills, through the engine-house, and from there in succession through the brick-making department, "wire-cut," "patent-pressed," and "moulded" bricks of every type being in process of manufacture; next through the drying-sheds, where all the waste steam is made available for the purpose; and so into the



portion of the works where ordinary thick quarry tiles are made; thence through the Terra-cotta Department, where huge blocks destined for the main cornice of the *Manchester Guardian* Offices, the Rainhill Lunatic Asylum, and other prominent buildings, were being turned out, together with every conceivable form of moulded work required throughout a building, including balustrading, heads and bases of columns and pilasters, carved panels, swags, pedestals, terminals, vases, ridge tiles, &c., made to order for buildings in every part of the country. A visit was then paid to the modelling-room, where a number of men and boys were at work modelling in plaster of Paris, from designs either made by Mr. Edwards or sent to him by architects to be carried out. The foundation of this department was understood to be due to the energy of the general manager (Mr. Bryan), who gained his knowledge in the South Kensington Schools, and has here raised a school of modelling of which any man might be proud, the material upon which he has had to work being entirely local talent, in the shape of National School boys, who have been trained to a pitch of excellence which is surprising. The party next went through the drawing-office, where a number of draughtsmen were at work, presided over by Mr. Richardson (a pupil of Mr. Verity, of London). The drawings of works in hand were inspected, and then the roofing tile department was gone over. Here the manufacture of roofing tiles in all its branches was thoroughly explained, and the encaustic tile department entered. This portion of the works is under the management of Mr. Denny, and he very clearly explained in a practical manner the entire process, which was generally pronounced to be of a most interesting character. Thence the clay-mixing rooms (for colours other than those of the natural clay); the fitters' shop, where the intricate patterns for encaustic tiles are made; the pattern-room, where thousands of patterns of moulded bricks, &c., are stored, and the tile store-room, were successively explored, and in the latter numerous entirely new samples were exhibited, which were very favourably commented upon. The tile-glazing process and firing were then explained; and finally, several kilns just being drawn, were entered and the contents examined.

Many acres of land are covered by the works, and they are a surprising instance of what can be done with capital and energy combined, the whole being the result of only ten years' work, and having been built up bit by bit as the trade was found to develop—one department after another being added as required; reflecting the greatest credit on Mr. Edwards' ability and indomitable perseverance.

So much time had been expended in going over the works, owing to the interesting nature of the manufactures, that a proposed visit to Mr. Edwards' fireclay and yellow terra-cotta works at Trefynant had to be abandoned, and the party were driven to Mr. Edwards' residence, Trevor Hall, where they were most hospitably entertained.

### "GREAT ALCAIRO."

MR. F. T. PALGRAVE, in a letter to the editor of the *Times*, writes:—Before it is too late, if indeed it be before, I ask leave to present a plea in which I am sure of the sympathy of all civilised mankind on behalf of special and immediate measures to save that great city which Milton conjoined with Babylon as the type of Eastern magnificence. From the day on which

Portus Alexandria supplex  
Et vacuum patefecit aulam,

it has been obvious that Cairo was likely to suffer the same fate; and the general tendency of later intelligence now points to that fate as imminent, unless energetic steps are at once taken by our forces. The destruction of the European quarter is prophesied, but I apprehend that in a city so constructed as Cairo there will be no power to limit the flames and spare the ancient capital, even if the wish existed among the Communist hordes of Arabi.

On the loss of life and wealth, the waste and the woe, the shock to unhappy Egypt and her loyal ruler, the material and political evils of such a catastrophe I need not speak. These direct human interests must come first in our thoughts and in the measures to be taken by our gallant forces. What, however (in default of protests from men who personally know more of the land and its literatures and its antiquities), I wish earnestly to enforce is the blow to the higher and permanent interests of civilisation in Europe and in the East which would also thus be given. Perhaps this element in the East is not fully or generally known. The wretchedness of war, sufficient, one might think, in itself, is perceptibly increased and rendered far more lasting when the field of warfare is one signally consecrated by the triumphs and the treasures of peace. We all feel this if Athens or Rome be named. Cairo is another of the memorial cities of the world. Besides its singular picturesqueness, it is, architecturally, the most brilliant and typical example surviving of the old Arabian splendour, in its dwellings and its public buildings, a treasury of exquisite ancient art, if destroyed, simply irreplaceable. But there is much beyond this. Cairo contains now the great local collection of what has been rescued from the tombs of

ancient Egypt; it has become the great repository of the golden age of Arabian literature; its manuscript libraries hold the (often unique) texts of the famous poets, philosophers, and historians of the early Caliphate; it is the Alexandrian Museum of a civilisation which long preceded our own. In virtue of these relics Cairo is the one link which unites the strange splendours of ancient Egypt with the nineteenth century; it might be called the best surviving representation of those amazing efforts of art and intellect which, under different forms, connect us, through the days of the Ptolemies with the days of the Pharaohs and the first dawn of human civilisation.

The political elements in this lamentable conjuncture I wholly put aside. But, by the consent of Europe, by the consent of our consciences (however inevitable the course pursued, with its consequences, may have been), in the present state of Egypt *pars magna fuimus*. But it is simply for a service in which, by the very nature of the case, we must necessarily act as the "mandatories of Europe," that I here plead for the rescue of the finer, the peculiarly fragile, interests of humanity from those peculiar perils of barbarism which civilisation inevitably prepares within itself for its own treasures.

What compensation can be found, when order is restored, for losses such as are here involved? The process of the years may, we know, hide the miseries and desolations of war beneath the overgrowths of peace, after even a comparatively brief interval. But when centuries have passed, one such loss as would be that of the treasures stored in this city is remembered among men—is deplored, is execrated. There is here, I hope, an excuse for my appeal. If it be anyhow possible, let us not, for any mere reason of the moment, leave it to be said of England that from the ruin which legend ascribes to Omar in Alexandria, she might, in real truth, have saved Cairo, and did not.

### THE AMENDMENT OF THE LAW OF LIGHT AND AIR.

THE eighteenth number of the "Proceedings" of the Institute of British Architects contains several communications which have been addressed to the Special Committee on Light and Air. The following extracts will indicate the amendments suggested by architects:—

Mr. J. Whicford: The ultimate object of this Committee should be to devise a system of general application, defining a precise minimum distance and maximum height for new structures in relation to ancient lights; so that while such limit was observed a new building might be erected without risk of interference. But as all cases could not be brought within such a rule, the Committee should consider the character of tribunal best suited to finally adjust questions of the kind. In these exceptional cases the discretionary powers of a tribunal are most valuable. Only a tribunal could give on the one hand the fullest relief to an aggrieved party, especially where any intention to overreach or coerce was detected, and visit vexatious interference on the other hand with heavy fines, as well as costs. To suggest how such a tribunal should be constituted, whether an Equity judge should preside, and whether a practising architect of position could be fairly put forward as a proper assessor, is a material point for the Committee to discuss. I am of opinion that a general law could be founded on the judgment of the Master of the Rolls in the case of *Hackett v. Baiss*—a judgment which practically adopts the angle of 45° as the limit to which a building owner should be restricted—but to make such a judgment of general application it would require some enlargement in its terms. It would be necessary to define the distance at which an obstacle shall approach an ancient light; for example, if an angle of 45° is deemed to be the proper general angle, where properties abut, a roof of a new (or obstructing building) might at its starting-point be brought into contact with an ancient light, and this would be obviously an injury. I think, however, that this difficulty could be met. It might be laid down that, where no street or other space intervenes between an ancient aperture and the obstructing building, the latter shall in no case be brought at its starting-point nearer than feet to such ancient aperture. To my mind, the preservation of the incidence of light and air to an ancient aperture at an angle of 45°, both directly and laterally, would be a good law of universal application. In fact, though no angle is ever admitted by the courts, the angle of 45° is practically the limit adopted by experienced professional men, and I contend that it is only in very exceptional cases that it does not apply. If it were made law, nineteen-twentieths of the actual harass and difficulty would be at an end, though obviously it will be necessary to show that the general advantage of such an alteration in the law would greatly outweigh any possible interference with abstract right. It will also be advisable to consider whether in large towns under certain conditions the prescriptive right to light and air ought not to be abolished altogether, and whether, on the grounds of public expediency, Parliament should not be memorialised to that effect. Under the present state of the law it frequently happens that an old, often disused and petty aperture dominating an adjoining area, is the cause of infinite waste and mischief, and able to mar for no



good purpose whatever the usefulness and beauty of a new architectural structure.

**Mr. Arthur Cates:** The attention of the Committee should, in the first instance, be directed not to an attempt to devise some scheme for diminishing the evils which, at all hands, it is admitted the present law, as now administered, permits and encourages—thus accepting the present state of the law of light and air as equitable and correct—but rather to investigate the principles on which it is alleged that such law is based. To trace out as far as possible the state of things prior to the Prescription Act. To ascertain the reasons which influenced the Legislature in enacting the particular clause under the alleged authority of which so much extortion is practised. To trace out the manner in which this clause has received so wide an interpretation as is now given to it, and whether such authority was intended to have so extended a scope. To illustrate the mischievous and unjust action of the law, and the opportunities it offers for oppression and extortion, and thus give good reason for the pressing necessity for a change. To inquire into the law of other countries on this subject. To inquire into the municipal and building regulations in force in other countries, which in their application affect the altitude, position, and plan of buildings, so as to protect, in the result, adjoining tenements from injury. To consider whether some municipal regulations might not be framed—and so regulate the height of buildings in towns—and be made by law of universal application in England; and, as regards rights of light which are manifestly encroachments on the rights of the servient tenement, to consider how such servient owner could be effectually protected by the Scotch system, or otherwise from the aggression of his neighbour—the real evil-doer, and first aggressor—the dominant owner. Until the impossibility of obtaining a change in the present law has been clearly shown, any discussion of schemes for the palliation of the evils it causes would be undesirable, and they will not at present, I hope, engage the attention of the Committee.

**The late Mr. G. Somers Clarke:** My suggestion to the Committee would be to report that the present law, 2nd and 3rd William IV. c. 71, which gives a dominant owner a controlling and arbitrary power for all time over the servient owner's property, thereby checking, except under heavy and uncertain penalties, all possible improvements in accordance with the advanced spirit of the times, is of itself contrary to a wise public policy. That it should therefore be abrogated, so far as the powers apply to the fronts of buildings next public thoroughfares, no matter the width of the latter. That every building owner should be at liberty to erect his new edifice to any height his requirements demand, independent of his opposite neighbour. That the present Act of Prescription should be solely confined to back walls, skylights, and back yards or internal courts between adjacent properties, and not giving upon public thoroughfares. That a professional assessor should sit with the judge trying the Light and Air cases, to assist him in all technical points connected with the exhibits and models submitted by the respective litigants. These assessors should be selected, from their special experience on the subject, by the Council of the Institute, and submitted for the approval of the Court of Chancery before appointment. With an experience of twenty-five years in erecting new buildings in the City of London, I can recollect no one instance in which the money compensation, or any portion of it, accepted by the dominant owner as a solatium for loss of light, has been devoted to increasing the apertures or window openings on his own premises, so as to mitigate the alleged loss of light complained of. It may fairly be assumed, judging from these facts, that in a very large proportion of cases settled by compensation the alleged injury has been one of imagination, precedent to the erection of the building, and found subsequently, on its completion, an illusion.

**Mr. Edward N. Clifton:** With reference to these questions, which were referred to a special committee of the Royal Institute of British Architects, I have a few observations to make. To members of the Institute the questions have a wider range than the simple cases submitted for the decision of the Law Courts, particularly with regard to sanitary and architectural matters. In any decision to which the Committee may arrive these will have to be most carefully considered. Several propositions have been suggested:—1. That a building owner should be allowed to carry his building to any height he pleases on paying compensation for any injury he may inflict on his neighbours. To this I most strongly object. On sanitary grounds, it is very undesirable that enormously lofty buildings be permitted under any circumstances in the narrow streets of our crowded cities. Architecturally also I think it would be a mistake in such streets to have buildings of the height of, say Hankey's in Westminster. Recent legislation has been in the direction of limiting the height of buildings, having regard to the width of streets. In this limitation I fully concur. The next proposition is the repeal of the Prescription Act. I am equally opposed to this. Numerous rights have grown up under the provisions of this Act, and to destroy them would involve intolerable hardship upon those who have so acquired them. My suggestion for amending the present state of things is as follows: I would strictly define the height to which buildings may be carried in all streets, having regard to their width, and also the height in back yards; and this to be applicable to the whole

kingdom. I have little doubt that, from the experience of many on the Committee, some satisfactory settlement of these heights may be arrived at, without unduly infringing the rights which any adjoining owner has. Probably some modification of the law in France might be made to suit this country.

**Professor T. Hayter Lewis:** The consideration of this subject may, for convenience, be divided into—first, the erection of buildings otherwise than towards the public street, and thus not affecting the interests of the public in general; second, the erection of buildings towards the street involving the interests of the public generally, as well as those of adjoining or opposite owners; third, the invasion of privacy and acquisition of rights to light and air by the opening of new windows overlooking the neighbour's premises. And the questions relating to the above cases are: (a) whether the right at present obtained by a twenty years' enjoyment of the easement, and by other means, could be made less onerous on building owners? and (b) whether the means of ascertaining the injury sustained could be made more definite?

1. No one can doubt that the twenty years' easement often acts in an exceedingly hard way (often absurdly so) on an adjoining owner. I recall one case, *e.g.*, in which some small openings, almost disused, in a long range of stabling which was soon afterwards pulled down, absolutely stopped, for a considerable time, the use of some valuable building land in their rear.

2. Further, the easement often acts prejudicially to the dominant owner himself, by making it imperative on him, in rebuilding or altering his premises, to preserve the precise ancient openings (or such part of them whose rights he wishes to preserve), no matter how much this preservation may interfere with his design in his rebuilding.

3. Nevertheless, the right which this twenty years' easement now confers has been so thoroughly recognised in all our Law Courts, that I think it hopeless to attempt any essential modification of it. This right, acquired by twenty years' user, will probably be strengthened by the decision in the case of Dalton and Angus, wherein it is now decided that a twenty years' user gives a right to lateral support.

4. There is, however, another means of acquiring the same right as by user—viz., in the case of two premises belonging to the same landlord, one of whose tenants acquires at once, on obtaining his lease, the right throughout his tenancy to enjoy the same amount of light and air as he then enjoyed. This was prominently brought forward by Mr. Locock Webb at the discussion at the Institute, December 17, 1877; but the existence of the right is but little understood, and has often, to my knowledge, worked with great harshness. Its restriction could do little, if any, injury to anyone, and might perhaps be obtained.

5. In regard to the twenty years' easement, it is proposed by Professor Smith to allow the building owner to acquire the right of obstructing any ancient light by giving compensation to its owner. I confess that I should, in any case, have had very great doubts as to the justice and expediency of this; but after the opinion of Mr. Locock Webb, it really appears to me that it would be useless to aim at so great an alteration in the law, even if we really desired it.

6. Another suggestion of Professor Smith's, improved upon by Mr. T. Chatfield Clarke, seems to me a much more practical one, and to be well worthy of attention, viz., that the building owner should be compelled to give notice to any one whose ancient lights are likely to be affected—such notice to explain exactly the nature and extent of the proposed new building, and to be served in much the same way as party-wall notices now are. I doubt the expediency of a more extended notice by advertisement. In many cases this would lead to an amicable arrangement at the outset.

7. Supposing that no agreement were arrived at, and that the case came into the law courts, the course suggested by Mr. T. Chatfield Clarke, viz., for the judge to have the case reported on by a professional adviser, would seem to be also a step in the right direction.

8. But in any disputed case there would arise the questions as to the method of determining the precise injury likely to be done. The 45° angle may now be considered as obsolete, and recent decisions seem to leave the nature of the method more vague than ever. In the case of "*Lawes v. Carter*," recently decided by the Master of the Rolls, he said that, "as the law now stood, a man might diminish his neighbour's light to a certain extent, and the remedy depended upon the degree of obscurity."

9. The result appears, therefore, to depend even more than ever upon the opinion of witnesses, and I have found that the evidence of unprofessional witnesses is quite as conflicting and as puzzling to judge and jury as that of professional men.

10. I confess that I can see no definite principle on which the amount of injury, if any, can be decided.

11. But when we think of the great hardship which is often caused to a building owner by easements of light in some unimportant part of his neighbour's premises, and the ease with which the injury could often be obviated by some slight alteration in those premises, as pointed out by Professor Kerr, we are tempted to think that power might be given for the law to take this into consideration and to determine accordingly.

12. In regard to the houses abutting on the public streets, and



where, therefore, the interests of the public generally are concerned, I think that where the streets are newly formed some such rules as those enforced in Paris, as quoted by Mr. Arthur Cates, might well be adopted.

13. But such restricting rules would never be allowed in streets now made, as they would act with extreme harshness in such cases as, *e.g.*, the narrow streets and lanes in the City.

14. The third point, in regard to the erection of new buildings with windows overlooking a neighbour's premises, often causes a very serious depreciation in value of the said premises; but I presume that the question of privacy would be treated by the law courts much in the same way as would be the interception of a beautiful view.

15. But an equally important point is the right of light and air to be acquired over the neighbour's premises by an uninterrupted user of twenty years. The present mode of preventing this by screens is very objectionable and very difficult, and, lastly, when the new buildings are of great height it seems to me that when windows in a new building are to be opened overlooking a neighbour's premises, notice should be given to him and some power of restriction allowed to him.

### ST. JOHN'S WOOD SYNAGOGUE.

THE St. John's Wood Synagogue was consecrated on Sunday last by the Rev. Dr. Hermann Adler, Delegate Chief Rabbi. This building occupies an admirable site at the corner of Abbey Road and Marlborough Place. The architectural character of the building is Byzantine, original and freely treated; it is faced with red Fareham bricks, with terra-cotta and Dumfries stone dressings and ornamental details. The elevation facing the Abbey Road consists of a colonnade of arches, supported by red Dumfries stone columns with enriched capitals; this colonnade is flanked by two turreted towers with a gable between. The elevation to Marlborough Place is of a more simple character, but treated with the same architectural effects. The colonnade is approached by a broad flight of steps, leading into a vestibule 13 feet wide by 27 feet long. At each end of this vestibule is a staircase leading to the ladies' gallery, situated on the first-floor level. Under the stairs on one side is the secretary's office, and on the other side gentlemen's cloak-rooms, retiring-rooms, &c.

The ground floor of the synagogue is entered from the vestibule by three large doors opening outwards, and can also be approached from the east end, where additional doors have been provided so as to afford every facility for ingress or egress. The first floor has been, as before mentioned, appropriated to the ladies' galleries, which are very wide, and have broad passages behind the seating so arranged as to prevent crowding, to ensure decorum, and in the event of panic to afford an easy means of egress; the galleries have no less than four doors devoted to their use. The west gallery is carried over the vestibule, and thus forms an architectural feature of the interior. Off the landings of the staircases are ladies' retiring-rooms, lavatories, &c. On the second floor is a large committee-room, with lavatories and retiring-rooms attached.

The synagogue proper consists of a centre nave and two aisles, the galleries being supported upon coupled iron columns of ornamental design; these columns are carried up to the ceiling. An ornamental screen forms the gallery front, enriched with a vine-leaf running ornament and ornamental iron panelling. The west end is formed by a series of arcadings in harmony with the other portions of the gallery, and the east end is devoted to the ark or sanctuary, which is formed in a deep arched recess, approached by a flight of marble steps. The chamber for the reception of the Scrolls of the Law is approached from the sanctuary recess, and is of a very ornamental character, its entrance being flanked by marble columns with enriched capitals supporting a tympanum, and decorated with symbolical enrichments. The windows are fitted with stained glass from the architect's design, and executed by Mr. William Gibbs, of 397 Kingsland Road, N. In the sanctuary recess, on a level with the gallery, the windows are filled with geometrical stained glass, the centre having the Ten Commandments written thereon.

Great care has been exercised so as to render the fittings convenient and comfortable. The seating is of pitch pine, stuffed and upholstered, and is arranged in short blocks, having ample passage ways, so as to provide every convenience for the worshippers. The seating has been executed by Messrs. Cohen & Sons, of Curtain Road. The almezer, or reading-desk, is of pitch pine, having the choir behind and the warden's seats in front. A pulpit has also been provided, and has been executed from the architect's design by Messrs. Cox, Son, Buckley & Co., of 28 Southampton Street, Strand. The dimensions of the synagogue proper inside the walls are 58 feet by 45 feet 6 inches, and the height of the ceiling is 31 feet 6 inches.

Owing to the necessity for consecrating the building before the members of the congregation and their friends leave town, the time has been limited to complete the decorations of the building, but a portion has been executed by Mr. Rich of Fortys Road, Kentish

Town, under the direction of the architect, which although simple in character, evidences an appreciation of harmony and colour, and will greatly add, when fully completed, to the general pleasing effect of the interior.

The heating and ventilation have been carefully considered. Pure air is admitted into the building in a vertical direction, either at a cold or warm temperature, and the impure or vitiated air is carried off by means of ventilating ducts which have been provided over and under the galleries and in the main ceiling, an upward current being induced by means of Bunson's gas-burners.

The synagogue will accommodate on the ground floor about 240 male worshippers, and in the galleries about 250 ladies.

A separate house has been built for the beadle, containing every convenience. The cost of the building, exclusive of the purchase of the site, furniture, &c., will be about 8,000*l.* The builders are Messrs. Kirk & Randall, Woolwich, who have faithfully executed the work to the satisfaction and approval of the architect, Mr. H. H. Collins, F.R.I.B.A., M.I.S., &c.

### THE GOVERNMENT AND ELECTRIC LIGHTING.

SIR FREDERICK BRAMWELL has reprinted his letter to the editor of the *Times* on the Government Electric Lighting Bill, a measure by which it is proposed to interfere with public enterprise in undertaking works of magnitude. He says:—

I believe that very few of the public, and, indeed, very few of the members of the House of Commons, are aware of the gravity of the principles which are involved in the provisions of the above Bill.

It is but too commonly assumed that, being a Bill for a specific object, that of electric lighting, its provisions can but little concern those not interested in that lighting, unless, indeed, they be persons engaged in the supply of gas. Such an assumption is, however, by no means warranted, as the principles which underlie the Bill are, I fear, intended to be of very extended application.

In your leading article of Monday you enumerate the advantages attendant upon electric lighting, as set forth in the evidence of the President of the Royal Society—advantages so great that all must desire to see electricity laid on for domestic use, a desire shared in, I presume, by the Board of Trade, or they would not have introduced the Bill. I feel, therefore, I am entitled to say that the Electric Bill must be taken as intended to give facilities for bringing into practical commercial use a meritorious, but as yet undeveloped, undertaking, and that electric lighting is clearly not to be looked upon as some objectionable thing, which, although it cannot be wholly stopped, should as far as possible be kept down by restrictions; and therefore, I presume, it may be taken as conceded that the Government would not seek to weight such an industry in its very outset by burdens greater than those which it would see fit to impose on other older and fully developed, but certainly not more meritorious industries. This being so, I fear it follows that the most cruel conditions of compulsory giving up of the undertaking which are imposed in the Bill upon electric lighting, will, at the very first opportunity, be imposed in all cases where private enterprise seeks Parliamentary powers to enable it to supply public needs.

In your article of Monday you stated what these conditions are, but let me repeat them. The Electric Bill, by clause N of section 14, provides that where the lighting is done by an individual or by a private company, under a provisional order confirmed by an Act of Parliament, then at the end of fifteen years the local authority of the district lighted shall be entitled to say that it desires to purchase the undertaking, and thereupon the undertakers shall be compelled to sell. This in itself would be a sufficiently hard provision were the terms of payment fair; but the terms of payment are most unfair, for the arbitrator who, failing agreement, is to fix them is forbidden to take into account in so doing either past profits, goodwill (which means present profits), future profits, or any allowance for compulsory sale, and, having been thus told what he is not to allow, he is directed to ascertain the then value of the land, buildings, machinery, and plant, having regard to their suitability for the purposes for which they are intended, and this is to be the sole payment for the acquisition of the undertaking. Further, if the local authority should not choose to exercise this option at the end of fifteen years, then at each recurring period of five years the same option is to re-arise.

As I have said, there is nothing in the nature of electric lighting to justify exceptional harshness; on the contrary, it is regarded with approval, and thus, if there be any exceptions, it is to be supposed they would be exceptions in favour of this useful, desirable, but undeveloped industry. I fear the obvious conclusion to be drawn from the foregoing considerations is that in all future applications to Parliament for a Bill to light a town with gas, or to supply it with water, or to make a new railway from A to B, there will, in the interests of consistency, be inserted provisions that at the end of the fifteen years the local authority may buy the gas undertaking at the then value of the fifteen years' old pipes and



fifteen years' old works, that it is to get the water-works on similar terms, while the railway, extending over the districts of many local authorities, will be doomed to be acquired by the Government for the then value of the land, works, rails, and rolling-stock.

Is the country prepared for this? Has the time come when private enterprise, which, I believe, has made this country what it is, shall be discouraged, and such undertakings shall pass into the hands of governing bodies, be they corporations, local boards, or the Imperial Government?

I believe that the making of the governing bodies into traders is one of the gravest of mistakes. Many valid and weighty reasons could be adduced in support of this proposition, but I must not trespass upon your space. There is one matter in which, perhaps, a governing body may be allowed to be interested, and that is in the supply of water. There are two circumstances which render this different from any other kind of supply or trading—one is that it is so unlikely as to be practically impossible that the commodity will ever be superseded, and the other is that on sanitary grounds it is necessary to charge persons for water on the basis of a rate, and not according to the quantity used, just the same as I, living in a moderately good house, pay more for my share of the lighting, the paving, and the use of the sewers than is paid by an artisan deriving just the same benefit from them; so I, living in a house of that kind, pay some 1s. 6d. to 2s. a thousand gallons for all the water I use, in order that the artisan may have the water that he uses for some 2d. to 3d. the thousand gallons. These exceptional circumstances may possibly justify the supply of water by a governing body, although even a water undertaking is, I believe, best conducted when the supply is in private hands and the public body is confined to the supervision.

One further observation, and then I feel that I must stop, not because that which I have to say upon the subject is exhausted, but because of the length of my letter. It must not be supposed by any of the public who are not conversant with such matters that the mode proposed for assessing the amount to be paid by the local authority for the acquisition of the undertaking is universal or even common. On the contrary, there is not a single instance of such a mode. The only thing bordering upon it is that given in the Tramways Act, 1870, and it would be perfectly easy to show, as I have shown elsewhere, the wide difference that prevails between the case of the tramways and that of the electric light; and, moreover, when it suits the public body to purchase upon income, then pains are taken to make sure that income shall be the basis. Let me refer to the Act of 1870 for freeing the toll-bridges of the metropolis, and it will be found there (section 5) that these undertakings were to be acquired upon regard being had to the net annual value of the tolls. It was well known that the bridges were yielding inadequate dividends. It was well known that had they been acquired for the then value of the lands and buildings, having regard to the purposes for which they were intended, the sum to be paid would be, in many cases, a very large one—practically that which a new bridge would cost, less the small depreciation. Thereupon care was taken to ensure that the acquisition should be upon the revenue. I was engaged in several of the arbitrations, and among others, in that by which Waterloo Bridge was acquired. This bridge, with its approaches and land, cost 1,050,000l. sixty years ago. It would have cost very much more at the present day. Nevertheless upon a sum arrived at by the capitalisation of the net revenue, that bridge was acquired for 475,000l. Sir John Hawkshaw stated that the very lowest cost for which the bridge and the approaches could be made at the present day, wholly irrespective of land, was 700,000l. Notwithstanding this foreseen result, I, who was consulted by the Bridge Company, felt that no objection could be urged against the principles of payment arrived at by capitalising the revenue. But this, the right principle, has not been followed out in the Electric Bill. There, at the end of fifteen, twenty, twenty-five, and every period of five years after the fifteen, the local authority watches to see if there is a profit, and if there be, then it comes in and buys, not upon the profit, but upon the materials. If there is no profit, so that it would not be worth while to buy the materials in order to earn the income, then there is no obligation on the local authority to buy at all, and thus in effect the Bill says:—"As long as there is no profit or a poor profit, you, the undertakers, may continue to work, but the instant you get anything like an adequate return, then we will come and buy you up, at a price which must inevitably be a comparatively small fraction of the capital you have laid out in your undertaking." I feel compelled to repeat that which I told the committee, "This is a monstrous proposal."

It is on the foregoing grounds, I say, that the passing of this Bill must be looked upon as the beginning of the end of the carrying out of public enterprises by means of private capital.

With respect to electric-lighting companies, I believe there is plenty of isolated work for them to do, to make a return to their shareholders, but this Bill will deprive the general public of the benefits of electric lighting. The local authorities will not dare to embark in a comparatively unknown undertaking, and private companies will refrain from doing so with these inequitable conditions of payment on compulsory purchase staring them in the face.

## BRISTOL AND GLOUCESTERSHIRE ARCHÆOLOGICAL SOCIETY.

THE members of the Bristol and Gloucestershire Archæological Society this year selected the district of Stow-in-the-Wold for examination. The annual report, which was read at the opening meeting, stated that there are 446 annual members and 74 life members in the Society. The Council were gratified to be able to announce that during the last year Lord Fitzhardinge had very liberally and courteously given his consent to the very valuable MS. of John Smyth, the antiquary, written in the early part of the seventeenth century, and the ancient MS. register of the Abbey of St. Augustine, Bristol, which are preserved in the muniment room at Berkeley Castle, being printed by the Society for its members. During the present year a very valuable work, entitled "Archæological Handbook of the County of Gloucester," would be privately printed by Mr. G. B. Witts, one of the members of the Society. By a careful personal survey of the whole county, Mr. Witts had been enabled to discover a great number of Roman and British camps, Roman villas, British remains, and barrows, which had been hitherto unknown.

An address was delivered by the president for the year, Mr. Rhys Wingfield. In the course of it he said that, although less full of archæological remains than some districts, Stow was rich in associations of the past. During the time of its Roman occupation it was on the Foss, probably a look-out station, even as it was now from its eminence a landmark to all the country round. There they might meet with the Saxon monk in his cell, with his namesake the Confessor, from whom the town took its name, and so admirably sculptured over the door of Edward's Hall, where they then met, which for its use and beauty was not unworthy of St. Edward's patronage. They met there Essex on his way to the relief of Gloucester; they heard the clash of arms as he was opposed by Rupert. On the other side of Stow they heard Sir John Astley, after his last effort for the king, giving his captors the far-seeing counsel: "Gentlemen, you have done your work; go home, but mind you do not quarrel among yourselves." The church contained a "Jesus Chapel" for the guild of well-to-do woolstaplers, whilst the whole fabric was converted into a prison after the aforementioned battle. Then, again, the "Swells" contained plenty of interest and instruction. They supplied long and round barrows in profusion. The Manor House at Upper Swell, with its Jacobean fireplace, was associated with the Gloucestershire families of Stratford and Chamberlayne. The Bolde in Lower Swell was enlinked with Richard, Earl of Cornwall, at the one end, and Sir Robert Atkyns, the historian, at the other; and the chancels of both these churches were of much interest to the ecclesiologist. Next came Slaughter. The late discoveries made there by Mr. George Witts, the nine-gabled Manor House, the old family of the Slaughters running back almost to the Conquest, and the church so faithfully restored, provided splendid material for archæological discussion. That would end what he hoped might prove a successful day's excursion. On the following day they would begin with Icomb. Icomb Place was a unique specimen of a knight's home in the fifteenth century. Its association with the great names of Blackett, Baskerville, and a long train of others, invested the place with additional interest, whilst the church was a charming little gem of the Lancet Period. Bledington Church would be a great treat, with its many singular features and its fine collection of fifteenth-century glass. Chastleton, though over the county's confines, was too near to resist a visit there. The camp giving its name to the village they would find in a good state of preservation—originally British, but modified by Roman, and subsequently occupied by Saxon and Dane. The manor was connected with many distinguished personages, and it was through Catesby involved in the Gunpowder Plot. The church there was also a study for the ecclesiologist. On their way home they would pass through Daylesford, the ancient domain of the Hastings. Here they would find the tomb of Governor Warren Hastings, in the most elaborate church of modern time. They would look in at the old church of Oddington, now disused, in which were traces of frescoes, which it was to be hoped some of the society would be able to help them to decipher. Bourton, anciently called Salmonsbury, with its once spacious camp (of some 60 acres), and with its treasures brought to light by the new railway cuttings, he would leave to one to whom the archæologist owed much, Mr. J. Moore. At Farmington no doubt there was an extensive Roman villa concealed. The church also had its especial features, and a ship's rudder, connected with the name of Tagson, awaited explanation. Norbury Camp, and its long barrow within it, in a line with Cirencester, Bourton, and Doon Camps, each about equidistant, told of British occupation and obstinate resistance. The church at Northleach was a glorious pile, with a mighty tower, and a perfect porch. It dated from the fifteenth century. Hampnett Church, another Elkstone, was a surviving specimen of what our small village churches were in the Norman days. The register there was interesting in many respects: in this, for one, that it gave the measure or extent of a yard. Notgrove Church, as in the cases of Bledington and Slaughter, would be ably described by Mr. Cutts. The Manor House, connected by relationship with



Dick Whittington, would crown, he hoped, their excursion with what attended his career, namely, success. He had only to add one regret, that their excavations at Barrington, although it had been considered conclusive that they were of Roman origin, had not been deemed of sufficient importance to find a place in the programme, and allow him the opportunity of entertaining them at Barrington.

The parish church of Stow was described by the rector, the Rev. R. W. Hippisley. The building had, he said, undergone many transformations. Traces of Saxon, Norman, Early English, Decorated and Perpendicular work were to be discovered in the church, which had been restored by Mr. Pearson. It was clear that the tower was built after the chancel. The chancel arch was certainly peculiar, but he did not think it was pretty. Outside the church the old line of the masonry could be traced. The older parts of the church were built of the local stone of the country, whereas the other parts were built of better stone. The strength of the church was not comprised in the size of the stones with which it was built, but in the great thickness of the walls, which he believed were put together with concrete. Having occasion to examine the upper wall of the chancel, they came upon the stone roof, showing that the chancel was originally covered with a stone roof. He pointed out the chapel in the north aisle which had been dedicated by the woolstaplers and called Jesus Chapel. In the church is a large painting of the Crucifixion by Gasper de Crayer, of Flanders, a friend of Rubens and Vandyke. The date of the work is 1610. It was stated that the figure of our Lord was painted by Rubens himself, and the other figures in the picture by his pupils, though the credit of the work is given to Gasper de Crayer in a brass plate fixed in the wall beneath it.

#### Stow Cross.

At the evening meeting a paper on the old cross at Stow was read by Mr. H. Medland. It was, he said, supposed to have been erected in the fifteenth century by Robert Chester, the same man who instigated and contributed largely to the erection of the tower of the church, and who also obtained a licence to found the Holy Trinity Guild, and to erect a chantry, to which latter purpose he probably appropriated the north transept of the parish church, otherwise called the Donington Aisle. The roof of the nave of the church is supported on twelve well-carved stone corbels, principally representing human heads, which are supposed to be portraits of the leading people of the town, namely, the rector, the chaplain of the Trinity Guild, the benefactors of Stow, and their wives. Amongst them is one which is supposed to be a representation of the said Robert Chester. In Pooley's "Ancient Crosses of Gloucestershire" there is an accurate drawing of the cross as it existed before restoration. The remains consisted of the base, about seven feet square and two feet high, two steps, square socket broached into an octagon, and a monolithic stop-chamfered shaft about seven feet high. The base and steps had become much dilapidated owing to the running up and down of children. The late Lord of the Manor, Joseph Chamberlayne Chamberlayne, on March 29, 1871, generously gave the sum of 2,000*l.* to secure a supply of pure water to the town; and it was to commemorate that and other of his benevolent deeds that a sum of money was subscribed by the inhabitants of Stow wherewith to erect some fitting memorial of him, and which eventually resolved itself into a scheme for the restoration of the old cross. The form of the top of the shaft, and the fact of it not being quite square, led to the supposition that the original headstone must have been somewhat like those of Ashleworth and Ampney Crucis, which have consequently been taken as a guide or precedent. The carvings in the headstones of these crosses are more or less of an historical character. The restored headstone is gabled and the two ends are coped, with a moulded and cusped niche, which (with the exception of that on the south side, which is occupied by a road) are filled with carvings representing objects of local interest. That on the north side represents Robert de Jumieges, Abbot of Evesham and Lord of the Manor of Stow, receiving a charter from William Rufus to constitute Stow a market town; the accessories, such as the throne, shielded with arms of Rufus, &c., are in accordance with the period of his reign. The niche on the west side contains a figure representing Robert Chester, with a model of the church tower in one hand and the old cross and Chester's arms, on shield, in the background. The head and head-dress are copied from the corbel in the church before referred to. The east niche contains a portrait of Mr. Joseph Chamberlayne Chamberlayne, to whose memory the cross is restored, with the manor house and shield, with his arms in the background. The headstone is surmounted by a floriated cross, the entire structure being 19 feet 6 inches high. A substantial wrought-iron railing has been fixed on the restored base to prevent a repetition of the mischief which caused previous damage. A cast-bronze plate with an inscription is let into the socket on the south side. The stone used in the restoration came from Farmington, with the exception of that used for the carved headstone, which is from Sireford. The restoration was carried out under the direction of Messrs. Medland & Son, architects, Gloucester.

#### Chastleton and Icomb.

A paper on Chastleton and Icomb was read by the Rev. D. Royce. Chastleton furnishes one of the first instance of a vicarage

in England. We find mention of the church being dedicated in the twelfth century. The Catesby family lived here for six generations. One was fined a thousand marks for harbouring a Jesuit. The son was the conspirator, who is said to have sold Chastleton to obtain gunpowder for the Gunpowder Plot. But as a matter of fact the estate had gone from him in the last year of Elizabeth's reign. After Essex revoked he had no settled abode. Other families are the Ancestes, who lived at Brookend, and the Greenwoods. More recent families connected with the place are Biggs, Fothergill, Halifax, Jones. Icomb is undoubtedly a British name. It was formerly more extensive than it now is, and included in the coombes were Coombe Baskerville and Westcote. From a record dated 1065 it has been supposed that the whole of Steccacombe in the time of King Harold belonged to the prior and convent of Worcester, and that afterwards they were deprived of the Gloucestershire portion, in which Icomb Place is described as being during the Norman invasion. Durandus, Sheriff of Gloucester, had this place at the time of the Conquest. That some person of wealth and piety lived here in the time of Henry III. might be inferred from the style of the Lady Chapel in the church, which is part and parcel of this place. In the reign of Edward II. crops up a family whose chief, in pursuance of the prevalent custom of those early times, assumed as a surname the name of the place of his abode. The place is now a shell, but it is a relic without a rival in the county. Respecting the architecture much perplexity prevails. Mr. Royce proceeded to give a detailed description of Icomb Place, among other details noticing a fine table whereat might have sat Sir John Baskerville telling of Agincourt, one of the owners of the place having been there. In one part of the building some supposed there had been a chapel, but others demurred to this view. He pointed out the position this was supposed to have occupied, and also other apartments in the building. There was a good window, of three lights, in the east wall, well moulded, like the window below. If this was admitted to be the window of the chapel, it might have contained a small oratory, or kind of family pew. One of the Cope family, connected with this place, is made in his effigy to give forth this maxim:—"Let others learn to live; there's nothing I esteem worth learning but the way to die."

The buildings mentioned in the programme were visited with the assistance of Mr. J. E. K. Cutts, Mr. Wits, Mr. Williams, Mr. Middleton, and Mr. Waller. The concluding meeting was held in St. Edward's Hall, when it was decided to meet next year at Bath. This report has been taken from the *Gloucestershire Chronicle*.

#### SCOTTISH SOCIETY OF ARTS.

AT the meeting of the Royal Scottish Society of Arts on Monday the reports on the papers read during the session were submitted. On Mr. Wilkins' mode of preventing loss by fire, and on his improved fire-proof doors and shutters, the committee reported favourably, remarking, however, in regard to the suggestion that trained firemen should be in constant attendance during each performance in theatres, that, although admirable in point of principle, it would, except in large and paying theatres become an item of expense that might be objected to by proprietors. Mr. Benjamin Aitken, foreman smith at St. Margaret's Works, read a paper on "The Welding of Cast Steel." The ordinary method, he remarked, of welding cast steel was to heat it a very little more than blood red; if heated much above that it would break off or crumble away, and thus become useless. In welding cast steel they must have some "flux" that would have an ameliorating influence on the steel, and allow it to be heated up to a welding heat, and at the same time retain its form and quality. After alluding to various compositions used for this purpose, including Drake's, which was sold at some 35*s.* per cwt., he said it had been discovered that stucco, which sold at 3*s.* 6*d.* per cwt., answered the purpose admirably. In using it they must be careful not to let the steel be too highly heated before applying the stucco, and always be careful to form the flux as early as possible. He had found that by this method steel not only retained but in many instances improved its quality. Several examples of steel welded in the manner described were produced, and a committee was appointed to report on the paper.

#### THE UNIVERSITY BUILDINGS, EDINBURGH.

AN address was delivered on Tuesday to the graduates in medicine of the University of Edinburgh by Professor Frazer, in which he referred to the difference in the arrangements between the new and the old buildings. He said:—

The methods of study have been transformed and a new era has been entered upon whose characteristics will be retained for many years, and probably during the remainder of its existence. This era is that of observation and experiment, the methods of all true science; of investigation of the sciences concerned with life, carried on independently of any immediate bearings upon the healing art. In every centre of medical education the distinguishing stamp of this era is to be seen. In our own University, the construction and arrangements of the new buildings show that it



has been amply recognised. In the older buildings the distinguishing features are large lecture-rooms, with miserable laboratories, imperfectly lighted, and only to be reached by arduous climbing of steep staircases. In the new buildings, palatial ranges of laboratories, well lighted, perfectly ventilated and heated, and luxuriously fitted with apparatus for work, have attached to them lecture-halls which constitute appendages to the laboratories rather than the main features of the buildings. Investigation and practical work are amply provided for, so far as space constitutes a provision; and if in some departments the lecture-rooms seem to afford but straitened accommodation, it is either mainly a defect which contrast with the vistas of roomy laboratories suggests to the morbidly disaffected, or it is a result of the appreciation, greater than could have been anticipated, of those who desire to be educated for our profession. If this scheme be completed in the perfect manner in which it has been designed and partly carried into effect, and if a generous public will endow the University with the increased pecuniary resources which the necessities of the changed conditions demand, medical education and research will be enabled to maintain in Edinburgh the leading position they have for generations occupied.

### THE LATE MR. J. C. WINTOUR, A.R.S.A.

THIS artist died on Saturday last. He had not reached his fifty-seventh year. The *Scotsman* says that Mr. Wintour was well known for the last thirty years to the frequenters of the annual exhibitions of the Royal Scottish Academy as a landscape painter, whose ultimate performance has never quite made good his early promise. Mr. Wintour has been for two or three years past in a failing state of health. A native of Edinburgh, the deceased painter received his education in art at the Trustees' Academy, then under the charge of the late Sir William Allan. Devoting himself to landscape painting, he soon attracted attention in the galleries of the Royal Scottish Academy with work of careful finish, which at the same time displayed true feeling for nature and an eye for rich, harmonious colour. Year after year he continued an exhibitor—not unfrequently a liberal one—his pictures gaining in breadth, and showing more and more the predilections of a colourist who had keen appreciation of the silvery charm of sunlight and the magical play of atmosphere. His landscapes also bespoke a certain happy skill in composition; and the rare tact with which figures were often introduced constituted an additional attraction. From time to time their merit was recognised by the Association for Promoting the Fine Arts, who purchased, among other examples, an excellent picture of *Minnow Fishers*, exhibited in 1860. In 1859 Mr. Wintour was admitted to the outer circle of the Royal Scottish Academy; and for some years afterwards he continued to produce landscapes which formed an interesting feature of the Exhibitions, dealing, as they did, like those which had gone before, with varied aspects of Northern scenery, from the shady woodland nook to such extensive prospects as one commands from the top of Moncrieff Hill. Gradually, however, he fell into a vague, not to say sloppy manner of painting; and latterly his work, though retaining not a little of the old charm in colour, lighting, and composition, has not been quite worthy of the reputation gained in more laborious days. He will be remembered for the productions of his vigorous youth, rather than those of what should have been his full-fledged maturity.



#### Mr. Burges' Advice.

SIR,—The advice given by the late William Burges "in a letter to a young architect," printed in your current number, is as surprising as it is humorous.

The letter in question is addressed, not to a boy-student, but to one who is reminded by his counsellor that he has "passed his apprenticeship, done his Academy, and finished his Continental tour." He has, in fact, thus, at some 26 or 28 years, say, become a qualified architect, as such qualification goes, and is, perhaps, as completely beyond "measurable distance" of being an artist as he can well be.

It was to such an one, a short time since, in a discussion following upon the reading of a paper "On Colour" by Mr. Geo. Aitchison, A.R.A., before the Architectural Association, that Mr. Riddett, the chairman of the occasion, naively remarked that "the young architect would do well to make the subject of colour in decoration a study, for the public taste was advancing, and architects were more likely to be called upon to execute such work." From the pen of the late William Burges we have now similar words of admonition for the guidance of the young architect. He is, in this instance, solemnly counselled to "learn to draw the

figure;" and, moreover, he is assured, with unconscious irony, that "a knowledge of the figure is the foundation of all good taste in art."

The soundness of the latter dictum is beyond dispute. Hard, though, will it appear to the young architect at such a moment to be told thus authoritatively, while fondly imagining that it was the capstone only that was needed to complete the structure of his professional education, that something has gone radically wrong with it from its very foundation.

Nothing can be more misleading and cruel than to induce young architects to imagine for a moment that the artistic gift of form or colour can be acquired by recipe in this way.

The very fact that as men they have had to learn architecture as a profession, instead of being stirred by early impulses to express themselves in colour or form, should be a matter of wholesome, if serious, significance to them on the point.

William Burges came by his powers of figure-draughtsmanship under diametrically opposite circumstances; so entirely so, indeed, that it is difficult to understand how he, in instructing others, could so overlook the teachings of his own experience. He had not studied on an impossible programme, aiming to be an architect first, an artist afterwards. Burges was artistic in his teens. Before he had devoted to architecture a serious thought, he had worked in the antique and life schools, side by side with many young painters and sculptors who have since become famous.

He had, by gift of nature, a feeling for form, upon which basis alone can figure-drawing worth talking about become possible. In other words, the ultimate mastery to draw the figure, and to know it is, like the creative power in colour, but the development of an instinct which is inherent from birth. If this faculty is not in the student, nothing will ever put it there. As well might it be attempted to educate a man unconscious of tune in the art of musical composition.

And as to "colour"! It is self-evident from his remarks on this subject that Mr. Riddett fully shares the confusion of mind common to professional architects when dealing with the art side of architecture. It has not occurred to him that the man who has lived long enough to become a young architect, and as such is so lacking in spontaneity of feeling for colour as to require, thus late in the day, to be urged, in professional interests, to take it up as a study, may rest assured that as colour did not take him up long ago, nature is against him; and that, thus hopelessly handicapped, he may, in mercy, be recommended to avoid altogether a subject in which he might become artistically "dangerous to himself and others."

I am, Sir, yours faithfully,

A STUDENT OF NATURE.

### REVIEWS.

THE IMPERIAL DICTIONARY OF THE ENGLISH LANGUAGE. By JOHN OGILVIE, LL.D. New Edition. Edited by Charles Annandale, M.A. Vol. III. Blackie & Son.

The volumes of Messrs. Blackie's Dictionary appear with the punctuality of a daily paper or a monthly magazine, although each contains eight hundred closely-packed pages. It is difficult to estimate the gain to popular education by the circulation of a work of this kind. A dictionary like the "Imperial" has a better claim than a newspaper to be called "a map of busy life, its fluctuations, and its vast concerns," and any one who reflects on the myriad subjects to which it relates, can hardly fail to have his mind expanded. Universal knowledge is beyond the attainment of the most attentive student; but he can at least from a good dictionary obtain a glimpse of what is knowable, and this is no mean advantage. The tendency of the book is to promote precision of thought. Wherever practicable the illustrations refer to special examples, and the architectural sketches are taken from existing buildings. In one column we find a doorway from Earls Barton, a window from Steetley, and arches from Norwich, although for many readers general types of Norman arches would serve equally well. It is said that Lord Chatham was in the habit of drawing inspiration for one of his great harangues from the pages of Nicholas Bailey's old-fashioned dictionary; but how much more definite, as well as more abundant, are the ideas which a good modern dictionary can suggest to an orator or a writer. No one need complain of a want of comprehensiveness in the "Imperial." Another feature that gives interest to the new edition is the etymology. Dr. Ogilvie was one of the old school, and was so ingenious in tracing words to a single source as to suggest kinship with the man who maintained that Gaelic was the language spoken in Paradise. Mr. Annandale takes a broader view, and does not hesitate to introduce two or more roots for a word whenever there is uncertainty. According to Dr. Johnson, a lexicographer is a harmless drudge, who busies himself in tracing the origin and detailing the signification of words; but the man who by his vagaries puts students on a false track is anything but harmless, and fanciful etymology is almost as bad as the genealogies of pedigree-makers. One of the advantages of the "Imperial Dictionary" is that the editor does not seek to gain a reputation by startling discoveries of the relationships of English words. He is an advocate of what Boswell called "the learned yet judicious



research of etymology." One example of this discretion is all that we can refer to. It is the carpenter's word "rabbet." Dr. Johnson derived it from the French "rabatre," to abate, or "raboter," to plane, and he defines the noun as a joint made by paring two pieces of wood so that they wrap over one another. Cobbett, who had much of the arrogance of self-educated men, seized on this word to show his mastery of French and his superiority to Johnson. "If the Doctor," he wrote, "had known French only tolerably well, he would have known that *rabot* is a carpenter's plane, that *raboter* is to plane wood with a carpenter's plane, and that boards fitted together by means of the plane, and not by means of the saw, the chisel, or other tools, are boards *rabotés*, or in English, raboted. How plain is all this, and how clear it is that we have got a piece of nonsense in our language because Dr. Johnson did not know French." It was characteristic of Cobbett to ignore the fact that Johnson did give *raboter* as a probable root for the word. But, in spite of Cobbett, it is by no means certain that our English rabbet or rebate has been derived from *rabot*. In making the joint, although the plane may be necessary, it does not strike one as being the chief, the indispensable tool, and accordingly we are inclined to believe that some other root must be found for the word which will be more suggestive of cutting. Ship carpenters call the angular recess *cut* into the sides of the keel to receive the planks the rabbet of the keel, and the word is used for joints where the wood has not been planed. In the "Imperial Dictionary" we find "raboter" given as the root, but "aboutier," to abut, is also suggested, and the latter is more plausible. We must say, however, that in no dictionary have we found a root for rabbet which appears convincing. If a French original must be sought, "rabouter," to piece, is preferable to "raboter," to plane; but it is more likely that rabbet is a provincial English word, or a corruption of one. In the "Glossary of Architecture" the root is said to be "rebattre," but as that means to repeat or to renew a beating (*battre de nouveau, répéter inutilement*), its relation to the English word is not manifest.

THE ACTION OF LIGHTNING, AND THE MEANS OF DEFENDING LIFE AND PROPERTY FROM ITS EFFECTS. By ARTHUR PARNELL, R.E. Crosby Lockwood & Co.

There is a temptation when treating of the effects of lightning to become sensational, and to exaggerate danger. But although the author of this book brings together a remarkable series of recorded facts and opinions, it cannot be said that he is a panic-monger. Like many enquirers in modern times on other subjects, he is opposed to the *laissez faire* policy, and suggests that the Government should undertake precautions to secure certain districts. He would have places where there were explosions indicated by some kind of marks. Many recommendations are given with regard to the construction of buildings, and to ensure safety it appears to be necessary to avoid metal-work on the outside, except in positions close to the ground, to use tiles in preference to slates, finials of stone instead of metal, eave-gutters of stone, concrete, or terra-cotta, chimney-pots of earthenware or terra-cotta, flat roofs covered with asphalt, &c. Clocks are not to be set high up, and stained-glass windows are to be without wire guards. The book deserves attention, and should be studied in connection with the report prepared by the Meteorological Society.

MODERN METROLOGY: A Manual of the Metrical Units, and Systems of the Nineteenth Century. By LOWIS D'A. JACKSON, C.E. (Crosby Lockwood & Co.)

Although a prejudice still exists against the adoption of the metrical system in this country, there is no doubt that it is less violent than it was when the alteration was first proposed. In all cases where the system has been tried it is found to be advantageous and to entail no inconvenience. It is, for example, easier to plot engineering surveys on a scale of a hundred or two hundred feet to an inch than on a scale of two or three standard chains. In dealing with measures of weight and capacity a similar result is seen, and as regards calculations of money the superiority of the metrical system is apparent if we contrast the difficulty with which a foreigner understands English accounts and the ease with which an Englishman masters those made out on the Continent. The isolation of England is evident from a glance at Mr. Jackson's book. It is a universal book of tables, and must have taken enormous labour in its preparation, and, like all the author's books, is marked by accuracy. Mr. Jackson has also given a set of metrical tables which he proposes for the assimilation of the present measures. The book is a convincing argument in favour of the adoption of the decimal system.

DANTE GABRIEL ROSSETTI: HIS WORK AND INFLUENCE. By WILLIAM TIREBUCK. Elliot Stock.

It is perhaps too soon to form an estimate of the work of the late Dante Rossetti, or of his influence. His pictures have been for many a year "caviare to the general," and although admiration of them is now less rarely expressed, we have yet to discover how far it is sincere and enduring. An age which at one time is

delighted with the productions of Mr. Frith, and at another time professes to be moved by flaccid imitations of Botticelli, cannot have stable principles in art. That Mr. Rossetti had his worshippers is well known, but it is generally found that influence like his rarely lasts when the earth is over the idol. Nor would there be much loss to the world if the cultus were now ended. Mr. Rossetti was, we have not the least doubt, sincere enough in his painting and poetry, and if there is little which is healthy about his works, they are the more expressive of a man who was ill at ease in body and mind. He was out of place and out of time, a resurrectionist mediævalist who might have been happy in Florence six centuries ago. But the dissatisfaction which was natural in him is ridiculous in his English imitators. "When I was in France," says Prince Arthur, "young gentlemen would be as sad as night only for wantonness;" but in our time it is not only the young folks, but substantial men and women, standing well with their bankers, and not troubled with dyspepsia or insomnia, who have made the discovery that "life showeth grim and bare." People judge of a master from his disciples, and there must be remarkable vitality in Mr. Rossetti's system if it can survive after so many of his friends doing their utmost to bring ridicule upon it.

Mr. Tirebuck appears to be one of those worshippers who fashion an imaginary Rossetti, and fall down before their own creation. The Grand Lama of Thibet is as nothing if compared with the new "teacher-jewel." "We would have had him patriarchal," says Mr. Tirebuck, "with the chants of continents to sooth the inevitably waning days. Remembering his devotion and labour, we would have had"—but here Mr. Tirebuck appears to have been confounded with the visions that arose before him, and the uninitiated can never know what was the fate awaiting poor Mr. Rossetti if his worshippers had their own way. Destiny was too much for them—"he went to the open to breathe its air, but the air, like a breath, inhaled his life away." It is not difficult to imagine how a man who shrank from the public gaze, and who had an Italian's sense of the ridiculous, would wince under admiration of this kind. "The pleasure which many of his worshippers experience in his work," says Mr. Tirebuck, "is only half of something they actually know, the other half being concealed, like the rose in its bud, within the possibility of their natures, and which they feel in a far-off mystic way not definite enough to be worded." But what a blessing it would be if not only the half, but the whole of the "something" remained unexpressed—if, in short, some dumb worshippers of the artist could be discovered! It is possible to be made more ridiculous by words than by perforations of D.G.R. on brass fire grates; and whenever Mr. Tirebuck attains reverence for the memory of the man whom he calls "a surviving plenipotentiary of early Italian feeling presenting credentials to British Common Sense," he will regret his precipitancy in publishing his essay.

## GENERAL.

Messrs. J. and T. Tillman have been appointed architects for the erection of the New Sunderland and Durham County Institute for the Blind, which is to be built in Villiers Street, Sunderland.

Messrs. Robert Boyle & Sons have been awarded the Gold Medal (highest prize) for their system of ventilation for buildings and ships, at the International Exhibition of Means and Appliances for the Protection and Preservation of Human Life.

Sir Rutherford Alcock, K.C.B., has accepted the presidency of the Health Department at the forthcoming Congress of the Social Science Association at Nottingham.

An Exhibition of Industry and Art was opened in Trieste on Tuesday by the Archduke Charles Louis. The building covers an area of 21,500 square yards.

A Bill has passed authorising the construction of water-works at Newquay. At present the inhabitants depend for supply upon a few wells. The works are undertaken by a company.

The Waterworks for the mansion in course of erection for the Marquis of Bute at Mount Stewart will soon be commenced. The water is to be conveyed from a reservoir at New Farm, which is about a mile distant.

A Brass Lectern has been presented to the Borough Asylum, Birmingham, as a memorial of the late Medical Superintendent. It was made by Messrs. Jones & Willis.

The St. Pancras Workhouse Competition.—A meeting of the Guardians was held on July 27, when the report of Mr. A. Cates on the designs for the proposed workhouse was brought up. He considered that the plans of Messrs. Young & Hall, and of Mr. H. H. Bridgman complied with the requirements of the Local Government Board. Nine guardians voted for the acceptance of Mr. Bridgman's designs, and seven for Messrs. Young & Hall's. Mr. Bridgman was accordingly declared to be elected architect for the new buildings, subject to the approval of his plans by the Local Government Board. The buildings are likely to cost over 100,000/.



# The Architect.

## THE INSTITUTE OF ARCHITECTS ON ANCIENT LIGHTS.



**A**FTER the long process of incubation which now seems to be essential to any demonstration on the part of the Institute of Architects—except when it is a mere splenetic assault upon impregnable authority—there has just been issued what is called a “preliminary report” by a committee which was specially appointed by

the Council about a year and a half ago on the *questio vexata* of the law of ancient lights. It is a somewhat lengthy, and indeed a carefully-prepared document; but as it consists almost entirely of opinions expressed by members of the committee in their personal and individual capacity, it lacks cohesion, and indeed cohesiveness. Some of the opinions, as might be expected, are worthy of attention; but as a whole the argument is unprofitable, and the probability of its making any public or even private impression is small. The gentlemen whose notions—we might say emotions in some cases—are thus laid before the world are Messrs. WHICHCORD, CATES, SOMERS CLARKE (the late), CLIFTON, and HAYTER LEWIS; Messrs. DARLEY, HARRISON, Q.C., and LOCOCK WEBB, Q.C.; and Mr. LEYBOURN GODDARD supplies an appended report on the history of the legal question.

Of these, the four lawyers, as would be supposed, occupy themselves with a dry and timid exposition of the law; the five architects with more or less bold and lively statements of their sense of the injustice of that law, and of the amendments which they themselves respectively, were they CÆSAR, would summarily introduce. As is usual in building affairs, the exposition of the lawyers turns out to be little else than theoretical speculation on words which represent mere figments of business; while the architects’ wail of practical distress is founded at the best upon a very hazy conception of the genius of the law.

Now the law of England, as the highest authorities have frequently and earnestly averred, is the perfection of human, and indeed of divine justice. There is an element in it which is facetiously called its “glorious uncertainty,” by virtue of which mortal man may never predict the result of a suit—except that ruinous costs must be paid; but every one is supposed to know the law in so far as his personal responsibility is concerned, and if no one except a lawyer is allowed to profess the slightest knowledge of it when anything comes in practice to the push, and indeed even a lawyer must do so with fear and trembling, this is what cannot be helped. It is not to be wondered at, therefore, that the law of such a thing as ancient lights should not be “understood of the people” generally; nor of the architectural order of the people specially;—nor even of the legal order itself—with reverence be it said. In fact, if any one who has acquired, by sad experience in the Courts of Justice, a sort of appreciation of the way in which this chapter of law and some others are found experimentally to work, were invited to name a subject with regard to which more than all else the rule is confusion worse confounded, he might fairly be at a loss to put any subject whatever in even momentary competition with that of “ancient lights,” or, as the alternative phrase goes, still more suggestively of chaotic darkness and stagnation, “light and air.”

To explain to the general architectural or building reader the whole question of “ancient lights” in a few familiar words is nevertheless, strange to say, a comparatively easy task. England being “the paradise of vested interests,” every window which is sufficiently old to have a vested interest in being lighted over a neighbouring property is held entitled to have that lighting respected for ever as an easement, and the owner of the neighbouring property must not (by building, for instance) obstruct it. With the title to the access of light there is a similar title to the access of air; but this point is much more difficult of explanation, and is, for the moment, scarcely worth explaining.

The interpretation, however of this principle of law—or

practically of justice and good neighbourhood between owner and owner in towns where natural lighting and ventilation are so frequently matters of difficulty—is by no means so simple a thing as the simplicity of the proposition we have stated would seem to imply. Owners themselves are found to be extremely exacting, and this in one direction just as much as in the other. They, however, being obliged to yield to professional advice, it is architects and lawyers who have to manage the matter. Concerning the architects, it is almost enough to say candidly that none of them, except a handful of accidental experts, have happened to devote any real attention to the subject. Concerning the lawyers the same statement may be made; and none of them will take offence when we say so, as many of the architects may perhaps be disposed to do. Even in the Courts, after the most elaborate examination of witnesses and the keenest argument of counsel, it seems to be generally almost impossible for the judge himself to arrive at a decision except upon some false issue. The only explanation of such a state of things that can be offered with due respect for authority is that lawyers cannot understand the practice of building while builders cannot understand the practice of law. It is well known, and indeed fully acknowledged, that in building questions more than anything else the legal mind finds itself peculiarly at fault; and if it happens that in building questions of this particular kind the incertitude is of the greatest, it is because the technicality is the most subtle in both law and building. The circumstance that law can only deal with abstractions, while in building there are no abstractions, seems to be here more notably exemplified than usual.

If we come, then, to the real issue, the point which has always to be decided in any dispute about ancient lights is the *materiality* of the obstruction. The window in question (being twenty years old) has acquired, according to English principles, an absolute right to the easement of lighting. The neighbouring owner has, of course, a right to build on his land; but he must so build, therefore, as not to obstruct or obscure the lighting of this window. On the other hand, any obscuration complained of must be not merely mathematical or fanciful or imaginary, but practical and substantial—of such a nature and degree, in other words, as to interfere “materially” with the convenience of occupation of the room which is lighted.

There are two points, therefore, open to discussion by such a committee as that which the Council of the Institute has appointed. The first is whether the right acquired by the window through long enjoyment is a just right—that is, a matter of really necessary rule in the interest of the public all round. The second is whether the mode of procedure by which the courts of law arrive at a conclusion as regards the measure of damage is the proper mode.

To inquire into the justice of the legal principle is probably hopeless; we can scarcely expect to obtain even the slightest change of the law; the doctrine of easements as direct property is too firmly established in England to admit of an exception of this kind being made; and even what little could possibly be attempted in the desired direction would have to be restricted, be it observed, to future easements, leaving quite undisturbed the property in those that already exist. But it is another thing altogether to examine and criticise the processes of litigation; and here no doubt something serviceable might be done if the committee as a body should happen to be competent to do it.

But when we find such a man as Mr. WHICHCORD, who is a thoroughly practical surveyor, bringing forward as his personal contribution nothing but the proposal that what is known as the old-fashioned and obsolete rule of the angle of 45 degrees should be made “a general law” by statute, the difficulty of accomplishing anything becomes at once apparent. “To my mind,” says he, professing to rely upon a certain case known as *HACKETT v. BAISS*, “the preservation of the incidence of light and air to an ancient aperture at an angle of 45 degrees, *both directly and laterally*, would be a good law of universal application.” But why? Mr. WHICHCORD does not say why; except that the MASTER OF THE ROLLS acknowledges the principle. But, as matter of fact, all that the MASTER OF THE ROLLS said in *HACKETT v. BAISS* was that, inasmuch as he found some sort of rule of municipal regulation extant whereby, at least in the metropolis and in ordinary circumstances, the height of a new row of houses is not allowed to exceed the width of the street, he should say that in a commonplace street about 35 feet wide the houses might reasonably be confined to about 35 feet high in the walls, with a moderate addition for roof and chimneys. On a subsequent occasion this eminent judge had



to explain himself further, in consequence of his principle having been openly challenged and repudiated in another Court; and he then expressly said that he never would have permitted himself to lay down any hard and fast rule of 45 degrees or any other angle; so that, when he was invited to apply his supposed rule to the case of a back-yard, he positively refused to acknowledge it. We mention this, not to raise any discussion on the merits, but merely to show how difficult it is, even for such an expert as Mr. WHICHORD, to deal with the introduction of any hard and fast line of law, however simple it may be. Mr. CLIFTON, again, an equally sound and experienced practical man, can only suggest this:—"I would strictly define the height to which buildings may be carried in all streets, having regard to their width; and also the height in back-yards; and this to be applicable to the whole kingdom." It would be impossible.

It is said that the lawyers abhor science; but how far such proposals as these on the part of architects recognise science with any effect we need not say. If an Englishman's window is to be the window of his castle, it is not by such rules that it can be protected or its protection restricted. The grievance would be changed in character, but the amount of complaint would remain the same. We recommend the Institute committee to go into the matter much more intelligently, if not carefully, than they seem inclined to do. Accepting the English law of easements as being unquestionably intended in theory to do justice between man and man in this matter, it becomes the function of the expert architect to apply the principle of that law justly in practice. It is idle to cry out that this cannot be done. It is equally idle to call for special legislation; nothing of the sort is needed, if the architects will but do their duty. It is still more vain to demand the establishment of hard and fast rules; every case must rest on its own merits, in this as in all other branches of law. The first question for investigation by a committee of architects is *how to measure the damage*, and this is the very point that the Institute report does not attempt to touch. If, as a second question, they ask *how far compensation can be made to take the place of prohibition, as a custom of the Courts*, this is perhaps as far as they can go.

One thing, however, the committee, somewhat characteristically, forget to mention. When "extortion" is practised—as it no doubt only too often is in questions of this kind—who "gets up the case?" An architect. On the other hand, when a flagrant defiance of the law is attempted, who is the promoter? An architect. When a fine building is ruthlessly shaved off to a horrible angle, who does it but a brother architect? It is useless to cast the discredit upon the lawyers; their work is but ministerial; it is the architect whose opinion puts them in motion; and if we say that the responsibility for all the wrong of which architects so bitterly complain rests upon architects, this is too plainly the fact to be disputed for a moment. It might not be amiss, indeed, if the Institute Committee were at first to confine their attention to this one point alone, even as a question of discipline.

### SHORING AND UNDERPINNING.\*

MOST of the shoring which is carried out in London (and in no city in the world is there more of that kind of work) may be described as empirical construction. The men who undertake it know or care little about the statical problems which are involved when houses are kept from collapsing by means of strong timbers so arranged as to be as much as possible in compression. But it must be allowed that in this class of construction experience counts for much, and it rarely happens that the shores are found to be insufficient. It is, however, prudent that the propping of dangerous structures should be conducted under the authority of architects, and questions on the subject now form a part of the programme of the Institute examinations. A man who was possessed of much experience in practical building would of course find no difficulty in arranging timbers so as to give security to a weak wall, although he might not have before given a thought to the subject. But there are many students who are not in that position, and it is for them that Mr. Stock has prepared his book. It is not a large book, and consequently cannot

contain descriptions of every work of shoring and underpinning, but enough examples are given to enable a student to be prepared for the examiner's questions, and, what is more important, to be qualified to direct workmen in dealing with a dangerous structure.

The theory of shoring is simple enough. To keep a wall from bulging too far common-sense would dictate the placing of a piece of timber vertically against the wall, with an inclined prop or shore fixed in the ground to take the thrust. In London the inclination of the prop has very often to be determined by public convenience, or, in other words, the base of the triangle formed by the wall, ground, and prop has to be narrowed as much as safety will allow. If several shores or props are requisite they must be well within the base, and of course they are gathered as closely as possible together at the foot. If, in addition, provision be made by means of cross struts to prevent the shores from bending or buckling under the thrust, then we may be said to have the metropolitan raking shore. A complete shore can be considered as a truss (or rather a cantilever), in which the thrust resulting from the house as a load is conveyed to a sole plate which represents the abutment. It is plainly an advantage that the shores should be subjected to as little cross strain as possible, and that no timber should have more than its proper share of force to withstand. To ensure this, care has to be taken with the form and position of the needles above, and with the inclination of the sole-plate below. It is in these details that the advantage of experience is seen. If it is found to be economical in mining to employ special workmen for the timbering, although nothing can be simpler than the props, headpieces, and cribbing, the same rule should hold in regard to the fitting and placing of shoring timbers. The dimensions of shores can be arrived at by calculation, but the gain would hardly be worth the trouble. Mr. Stock has been able to secure the co-operation of the contractors for the shoring executed by the Metropolitan Board of Works, and the following table of dimensions, which we suppose is taken from their practice, will be considered more trustworthy than the figures of a mathematician:—

#### Raking Shores.

For walls from—

15 feet to 30 feet high,	two shores are necessary in each system.
30 " 40 " "	three " " "
40 feet and upwards,	four " " "

Taking the angle of the shore at 60° to 75°:—

For walls from—

15 ft. to 20 ft. high,	4 in. by 4 in. or 5 in. by 5 in. may be the scantling	for each shore.
20 " 30 " "	9 " 4½ " 6 " 6 "	
30 " 35 " "	7 " 7 " 6 " 6 "	
35 " 40 " "	6 " 12 " 8 " 8 "	
40 " 50 " "	9 " 9 " 8 " 8 "	
50 and upwards,	12 " 9 " 8 " 8 "	

The system of shores should not, if possible, be more than from 12 feet to 15 feet apart; but if they are placed nearer to each other than this, the scantlings may be made lighter, which will be of great advantage in the case of a really dangerous structure.

A kind of shore much used in London is the horizontal or flying shore between two houses, consisting mainly of a horizontal strut strengthened by raking struts. The length for the horizontal timber should not exceed 33 feet. It is supposed by many people in London that there is a sort of Common Law right to make use of a neighbour's house for flying shores: that this right has limitations is suggested by a paragraph in Mr. Stock's book:—

It may sometimes happen [he says] that when it would be more convenient and economical to support a house with flying-shores, an objection is raised by the owner of the house (which it is proposed to use as an abutment, either because he is afraid of his wall being pushed in by the pressure brought to bear upon it, or because the unsightly appearance of the shores may be prejudicial to his premises. This objection he has a perfect right to make, and he can compel his neighbours—of course, at his own risk—to tie on the wall from the back, or, if there is room on their property for the erection of raking-shores, to adopt this method of supporting the wall. There is an instance of a kind on the Thames Embankment opposite the Temple station of the District Railway, where, although the wall of the house which requires support is over 60 feet high, and there is an admirable abutment for flying-shores close at hand, yet the more expensive method of raking-shores has been adopted, no doubt because the adjoining owner has objected to have his premises disfigured, as they certainly would be, by flying-shores butting against them.

\* "A Treatise on Shoring and Underpinning." By Cecil Haden Stock. London: B. T. Batsford.



There is an excellent chapter in Mr. Stock's book on Needle-shoring and Underpinning. The author recommends that in some cases trenches should be cut in order to allow of an examination of the foundations. The enormous expense which may sometimes be entailed by underpinning is shown by the outlay on the church in Moorfields. The Metropolitan Railway Company, to escape opposition before a Parliamentary Committee, undertook to provide against all contingencies, and we believe more money was expended on the substructure than would have been required to erect a new building. In the restoration of mediæval churches it is sometimes necessary to have recourse to elaborate shoring and underpins. A few suggestions on the subject have been given by Sir GILBERT SCOTT in his autobiography, and as they are derived from his own experience, are worth reprinting here:—

I. Be assured that no amount of shoring can be too much for safety, no foundations to your shoring too strong, and no principles of constructing it too well considered. II. Use the hardest stone for your new work which you can procure, and spare no pains in bonding it and tying it together with copper. III. Be very slow in your operations, excepting at critical junctures, when the very contrary is necessary; be careful in your principle of movable supports as you cut away old work; set every stone in the very best cement and run in the core with grout of the same material. IV. Key up well at the top and leave your shoring a long time after the work is done, and then remove it with the greatest care. V. (though more properly first). Tie your tower well together before you begin, and take special care of your foundations. Above all, have a thoroughly practical clerk of works, neither too young nor too old. The shoring must be all of undivided timbers, and often of four or more such balks bound and bolted together into one by irons.

Sir GILBERT SCOTT was too busy to be able to publish the details of the underpinning which he directed—although from a speech in which he describes the work at St. Mary's, Stafford, it is evident that he was engaged with some interesting examples. The most elaborate account of shoring and underpinning a mediæval church in this country is to be found in a paper read by Mr. J. P. SEDDON at the Institute in 1873, in which he described the operations at the parish church of Grosmont, in the diocese of Llandaff. The paper and illustrations have been reprinted by Mr. Stock, and form one of the most interesting parts of his book. In this case there was no excessive amount of timber employed, and the success of the experiment depended more upon skill than upon the inertia of a mass of material. In the arches the shoring was of two classes, the lower up to springing being a sort of tressel, while the upper part resembled ordinary centring, care being taken in the arrangement to bring the upper timbers over those on the lower part. The pieces were as carefully tenoned as if they formed part of a permanent structure, and it was found to be economical to have three sides of the timber sawn square in order to facilitate the framing of them together. The shoring in this case was an example of scientific construction, and at a moderate expenditure of money a most important building was saved from destruction. Considering what was practicable at Grosmont with a small outlay, and in the case of some of the English cathedrals, the necessity of expending 32,220*l.* on the shoring and underpinning of the tower of Bayeux is not apparent. M. VIOLETT LE DUC considered that it would be cheaper to take down the tower and rebuild it from the foundations than to adopt M. FLACHAT'S colossal framing. In cases of this kind more value appears to be set upon the temporary structure itself than upon its office. Even Mr. Stock is not above a weakness of this kind, for he says that "nothing is more satisfactory than to see a shore well made, and those who design and construct in this art cannot help feeling in such a case a pang of regret when their handiwork is cleared away!" These words would, we imagine, express what was in M. FLACHAT'S mind when he devised the Bayeux shoring, but they would hardly be reciprocated by those who had to pay the cost of the work. We do not, however, blame Mr. Stock for thinking highly of shoring and underpinning. He has in his book endeavoured to elevate operations which many people regard as being fit only for labourers by demonstrating that a common shore is not without scientific interest. His book is so well done that we hope he may be encouraged to write many more volumes.

An Etching of the Volunteer Review in Edinburgh, by Mr. R. Anderson, A.R.S.A., has been published. The scene is sketched from the north slope of Arthur's Seat.

## THE BISHOP OF CARLISLE ON ARCHÆOLOGY.\*

AS it is impossible for an educated man to live in Italy without gaining a love of art, or to live in Switzerland or our own lake country without becoming somewhat enthusiastic about natural scenery, so it would seem to be next to impossible to live in an old country like England, especially in this part of it, without becoming more or less infected by a love of archæology.

To go no farther, take the city of Carlisle, "the local history" of which, as we have lately been told on high authority, "stands out beyond that of almost any other English city on the surface of English history." Such a city is in itself a temple of archæology; and though our complicated system of railways, and our grand new station, and our factory chimneys have done much to vindicate our claim to respect in the minds of those who see things from a modern standpoint, still, nothing can obliterate the interesting history of Carlisle; and as her castle, her cathedral, her conventual remains, and some portions of her walls still stand as grand archæological monuments, so also recent examination has added to our knowledge and brought to light new treasures. I may mention in passing the discovery of the remains of a wooden stockade of Roman date in various parts of the city, corroborating the notion that the old Roman town was fortified, not with a stone wall, but with wooden defences; of some beautiful bronze relics, notably, a bronze torque; and of a large monumental stone, now in the Carlisle museum. Besides which discoveries belonging to the Roman period, it is only right to add that the careful restorations which have been effected by the Dean and Chapter, under the skilful and careful direction of the late much-lamented George Edmund Street, have thrown light upon several points connected with the Cathedral and the Abbey.

Passing outside our ancient walls, we find monuments of the past of the highest interest—English, British, Roman—in profusion. I will venture to specify those which have produced the deepest impression upon my own mind.

In the first place, it is impossible to pass from village to village in Cumberland without having the condition of things during the days of border warfare brought home very clearly to the imagination. It is not so much the existence of houses of defence like Rose Castle and Naworth, and the fact that almost every house of any magnitude contains its ancient tower or peel, though now frequently disguised by modern improvements—not this so much as the fortress churches, which brings back vividly the pugnacious and unsettled condition of the country a few centuries ago. Such churches as those of Great Salkeld, of Dearham, of Newton Arlosh, of Burgh-by-Sands tell a strange archæological tale. Perhaps in some respects the church of Burgh-by-Sands is the most interesting of those which I have mentioned. I may add that the tale which this curious church tells is rendered more, rather than less, clear by a recent careful restoration. There you have the tower with its impregnable walls, the iron gate between it and the nave, the north aisle with its windows high above the ground, and with a western entrance commanded by an aperture in the impregnable tower, through which a small gun within the tower would pour forth its contents if necessary upon an attacking party with great comfort and sense of security to those who manned it. Altogether, these fortified churches tell a strange and interesting tale. One of the grounds upon which Henry VIII. was petitioned to spare the abbey church of Holme Cultram was that it was the only place of defence of the inhabitants against the marauding Scots.

But the interest which is connected with monuments of border warfare and records of early English and mediæval history appears to me almost to vanish by comparison with that which attaches to the relics of the Roman occupation. A man has no need to be a skilled archæologist in order to be carried away by thoughts suggested by the Roman wall. May I say, in a parenthesis, how welcome amongst us is the Roman wall's historian—much more welcome than the greatest of his name would have been in Carlisle in those days to which I have just referred? I will venture to assume that most of us are acquainted more or less with Dr. Bruce's magnificent volume; and, assuming this, I will say boldly that to my own mind no monument of the past in our island seems to be comparable in grandeur and intensity of interest with the Roman wall. The identification of the various stations by means of the "Notitia," the light thrown upon the wisdom and craft of the great nation by the employment of foreign troops so arranged as to guard against conspiracy, the military skill evinced in the formation of a continuous road guarded by the wall from bitter foes on one side and by the vallum from questionable friends on the other, the beauty of much of the masonry, now as good as when first built, the evidence of a large population living in luxury and refinement in a country now waste and wild—these and a hundred other points which present themselves to persons of ordinary intelligence, seem to bring home to the mind Roman days, Roman power, Roman cleverness, Roman luxury, in a way in which books without such illustration frequently fail to do. A visit which I was

\* A presidential address delivered at the meeting of the Royal Archæological Institute at Carlisle.



permitted to make a few years ago to Chesters, and a day spent under the auspices of Mr. Clayton and Dr. Bruce at Borcovicus and the neighbourhood, seemed to me almost sufficient to convert the most utilitarian admirer of the nineteenth century into a devout archæologist. It is a curious comment upon the transient character of some of man's greatest works, that the commonest record of the Roman wall down south should be found in the London advertisement of "Best Wallsend Coals!"

It would be wrong, however, to limit the testimony of the Roman occupation of this part of Britain to the great wall. Even without taking account of its principal treasure, this neighbourhood would be rich in Roman antiquities. Especially I may refer to the remarkable discovery of Roman altars made at Maryport in the year 1870. No less than seventeen were found within a circular area of about twenty yards in diameter. And it is a striking fact that they were almost beyond doubt carefully deposited where they were found; they seem to have been hidden on some critical occasion, in order to save them from desecration. If this be so, we may congratulate the Romans upon their success, for so I think that security for some sixteen centuries may properly be called. An altar of Vulcan, which Dr. Bruce pronounces to be almost, if not quite, unique in Britain, would seem to have been an unconscious prophecy of the West Cumberland iron trade.

It is devoutly to be hoped that the existence of the spirit of which the Royal Archæological Institute is a chief embodiment will be effective in saving from injury or destruction some of the Roman relics which it is not easy to preserve by any direct agency. Complaints have been made in recent years of injury done to the inscriptions on the Gelt rock; and the county history contains a record of an inscription in the quarries near Rose Castle, which has so completely disappeared that I can find upon the spot not even a tradition of its existence. It seems to me strange, though possibly some good reason may be assigned for the fact, that in the Bill "for the better protection of ancient monuments," introduced by the Lord Chancellor, and now before Parliament, the schedules contain nothing Roman.

It would be impossible, as it is unnecessary, to specify all the interesting marks of the Roman occupation and the relics of Roman civilisation which abound throughout the district; but I will just refer to the remains at Ravenglass, because recent excavations, which have discovered the hypocaust, have placed the ruins there existing upon a firm Roman basis, which I suppose they previously occupied only in the minds of experts.

Passing from Roman antiquities, I may congratulate archæologists upon the remarkable discovery of the sculptured stone with runic inscription at Brough under Stainmore, and upon the additional light lately thrown upon the well-known cross in the churchyard of Gosforth. Doubtless we shall hear something upon both these subjects before the Carlisle meeting comes to an end.

It is matter for perhaps more than local satisfaction, that all the recent discoveries to which I have referred, and many others, are duly chronicled in the "Transactions of the Cumberland and Westmoreland Antiquarian Society."

The archæological wealth of this district in reality constitutes a subject with which even an archæologist would find it difficult to deal in a short address. I, who am not an archæologist, shall feel content in bringing my survey to an end with a notice of something which has lately been done in this diocese, and of which I believe that the Institute will approve.

I refer to an examination which has been systematically made of the ancient church plate existing in the diocese. The results of the labour expended upon this work have been far more interesting and remunerative than was at all expected when the design was formed. I need not specify these results, because they have been recorded in a volume, which I believe is published almost at the same moment as that which is signalled by the visit to Carlisle of the Archæological Institute, and of which I trust that many members will purchase a copy. Besides this, I may mention that some of the most interesting specimens of plate will be exhibited in our temporary museum. Amongst these may be specified a beautiful mediæval chalice, which I am able to commend to your notice as being one of about a dozen specimens known at the present time to be in existence.

Might not the example of the diocese of Carlisle be followed with advantage elsewhere? I ask the question with all modesty, but I will not pause for a reply.

Instead of doing this, I will occupy your attention for a few minutes with some remarks of a more general kind than those which I have offered hitherto. The time has gone by in which archæology can be confounded with antiquarianism of the Monkbarns type. We recognise that archæology, being in reality the science of past time, is the basis of history, of politics, even in a certain sense of religion itself. The discovery of a coin or of an inscription leads not merely to the enrichment of a museum of curiosities, but perhaps to the settlement of some historical doubt, or even to the re-writing of some chapter of history. And even apart from historical and kindred studies, some knowledge of what may be called archæology would seem to be in our own days a necessary possession of every man—and I may add every woman—who lays claim to what may rightly be called a liberal education. Indeed, so far from archæology being a special possession for

which certain eccentric persons of Dryasdust proclivities may be regarded as holding a patent, it is not too much to say that every well-educated person is in some degree an archæologist, though, like M. Jourdain in the matter of speaking prose, he may not have been always aware of it.

Such a person goes into a picture gallery. He may not be an expert, but he will almost certainly have made himself acquainted with the leading facts connected with the early development of pictorial art in the Low Countries, in Germany, in Italy; he will know something of the names and histories and characters of the early masters, and of the schools which they founded; he will take an intelligent view of art, because he knows something of its history. Is not this archæology?

And I suppose that the same thing is true of music. Of course we may in a certain sense enjoy music without knowing anything about it, especially if the music in question has the simplicity of "Cherry Ripe" or the patriotic associations of "God Save the Queen"; but if we wish to go beyond the mere tickling of the ear and the ignorant expression of satisfaction at a pretty tune, we must know something of the early masters of sound, must have traced the growth of musical science, and so have become in a mild form musical archæologists.

This fact is perhaps realised more distinctly in the case of architecture than in that of any other art. Architecture without archæology is manifestly mere confusion. There is plenty of knowledge of course which still remains the property of the architectural expert; but the larger number of educated persons, on going into a building like our Cathedral, feel themselves at home with the different styles of arches and windows that it contains; they will not grossly confound one date with another, they will see at a glance the rough history of the building, and so far forth they will prove the existence in their minds of archæological knowledge.

May I give an amusing instance to show that in this respect improvement has been made in recent years?

In the course of your visit to Carlisle you will doubtless see the Fraternity. The recent restoration has brought into prominence the pulpit, in which in olden days the reader stood for the edification of the brethren at their meals. It would be difficult now to mistake the purpose of the pulpit; but till lately it was popularly known as "the Confessional," and in order to carry out this view the artist who has drawn the pulpit for "Billings' Illustrations of Carlisle Cathedral" has represented a woman kneeling on the floor below!

I have remarked already that archæology extends even to politics and religion; and this is indeed true. I do not know upon what principle men settle the colour of their politics, or whether they all adopt the same principle, or even whether it can be asserted that principle of any kind universally enters into politics; but I am sure that any one who would take an intelligent view of public affairs must not be content to regard the present condition of this country, and its constitution, and its mode of government as something which can be examined in the abstract, without reference to the complicated history upon which it rests, and out of which it has grown. A politician must have a grasp of history, and history is archæological or nothing.

Nor is there anything unreal in extending these remarks, as I have done by anticipation, to religion itself. The complicated relations of churches and sects, the justification or the condemnation of the position taken up by this or that religious body, the hopes or the fears connected with any apparently new but perhaps essentially old development of doctrine or practice—all these, and many like things, can be intelligently judged only by the man who has gone deeply into the stores of Christian antiquity, and qualified himself for forming an opinion upon the present by a careful and candid study of the past. A sound divine must have other qualifications; but he may not omit to make himself a sacred archæologist.

And what shall we say of science—at least, of some of its branches? Surely we may say this, that geology and the sciences allied to it have opened up a hyper-archæological chapter in the history of the world. The works of man carry us back into a very ancient past; here in this country we have magnificent remains of Roman civilisation, and those remains testify to a previous civilisation, if civilisation it is to be called, of which we have relics in our British mounds and monuments; and the ruins of Troy, and the wonderful monuments of Assyria and Egypt, not to mention other countries, carry us back to a period when Roman power was yet in the womb of time; and the recent evidences of prehistoric man carry us further still into the dim darkness of ancient days; but the geologist can smile at archæology such as this, and can tell of days when as yet neither man nor his works existed, when the fauna and flora had nothing in common with what we now see, when the mountains which now are were not, when the arrangements of land and water were totally different from those which exist now. Archæology such as this, however, is not for us to-day; and, indeed, there is plenty to occupy an archæologist without trespassing on ground which belongs to others. In an old country like this, archæology is almost in the air; the names of places, Carlisle, Aspatria, Dovenby, Torpenhow; of mountains, High Street, Illbell, Silverhow; of churches, St. Mungo, St. Bees, Ninekirks; of families, Howard, Muncaster, Le Fleming, Curwen,



Senhouse—these names of places, and persons, and things, together with all the *bys* and the *casters* and the *thwaites* and the *kirks* seem to suggest, even to the most quiet, unimaginative mind, the almost necessity of asking questions as to the way in which names and things have come to be such as they actually are.

But there is archæology nearer at hand than this. Shall I be pardoned if I say that we have before us a remarkable study in archæology every time we read a page of a printed book?

The type is *Roman* letter; it is as genuine a relic of Roman civilisation as the Roman wall itself, and a witness of the days when we borrowed from our conquerors characters in which to express our language, which was not theirs. But what is the language printed upon the page? A composite result, as we all know: what geologists would call a conglomerate—a Teutonic basis, with bits of French, Latin, Greek, it may be Arabic or Hebrew, imbedded in it; so that to account for every word in an ordinary page of an ordinary English book would be a tolerably stiff exercise in what is virtually archæology, even to a well-educated man. But there is a still more curious piece of archæology existing on the page. In the corner you find a number; it is not in Roman figures, but in what we commonly call Arabic; and the complete explanation of these Arabic numerals carries us into the antiquities of India, the ingenuity of ancient Indian mathematicians in inventing what is called the *device of place*, and the manner in which Indian science travelled to the west through Arabia, this transmission being connected with the conquests of the great Arabian prophet, and so forth. The complete explanation of all phenomena presented by an ordinary page of an ordinary English book would form materials for a stout volume of an archæological journal.

But I must hasten to draw this address to a close, lest perchance the earliest part of it should become so ancient, as compared with the latter, as to try the patience even of professed archæologists. Shakespere makes his sententious philosopher in "As You Like It" speak of *sermons in stones*, and I will conclude my archæological remarks with one or two reflections extracted from a stone.

The stone shall be one in the walls of the church of Burgh-by-Sands, to which I have already incidentally referred. It is a stone which has apparently been in its present place for many centuries, and must have looked much as it does now when King Edward I. was here, and when he died hard by. Plenty of rough work in the way of border warfare that stone has seen. But there are certain marks upon it which open up another chapter in its history; experts will tell you that it is a Roman stone, and a very little experience will enable any ordinary eye to detect this fact. The stone, then, has been taken, like many others, which you may single out here and there, from the old Roman station, the existence of which the name of Burgh attests; and so we see that when our stone looked upon Edward I., or when Edward I. looked upon it, it was already an antiquity of respectable standing; it had then been quarried, say, a thousand years, and had witnessed many and strange vicissitudes of men and things. But if we trace the stone further still, and consider how it came to be in the quarry from which it was taken by the hands of the Roman soldier or quarryman, we shall find perhaps that it was formed from pre-existent materials belonging to a condition of the world not one thousand, but a thousand thousand years previous; and so we have archæology beyond archæology, and archæology beyond that. Our stone tells us not merely of mediæval history, nor even of Roman residence in Britain, but it bears in its structure evidence of formations and transformations going on under the influence of the powers of nature in the dim distance of the mysterious past. All things are comparative, and the portion of history with which archæologists are concerned is an almost inappreciable moment in the life of this stone.

Under the influence of such a contemplation archæologists may well feel that after all they belong to the present more than to the past. I will take advantage of this feeling for the purpose of saying that the most recent event in the history of Carlisle has been the preparation which has been cordially and laboriously made for the due reception of the Royal Archæological Institute. I trust that the event, though recent, with its present and future results, will prove interesting even to the most orthodox archæologist who honours Carlisle with his presence.

### MODERN CONSTRUCTION IN ITALY.

A PAPER was prepared lately by Signor C. Clericetti on the "Great Structures erected in Italy during the last Twenty Years."

The author chooses the bridges of iron and stone erected during the last twenty years as the structures which best exhibit the progress of engineering science, and he compares these modern bridges with those built by the Romans. The characteristics of these latter are grandeur, massiveness, and durability; of the former, lightness, economy, and rapidity of construction.

The Po between Pavia and the sea was never bridged by the Romans, but during the last twenty years four bridges have been

built over it. The lengths of these bridges are 577, 762, 427, and 400 mètres; 1,900, 2,600, 1,399, and 1,312 feet respectively; the spans varying from 213 to 250 feet. They are all girder bridges, supported on piers founded at depths of from 60 to 70 feet below highest flood level, and formed of iron cylinders sunk by hydraulic process.

To show the difference between the ancient and modern systems of construction the author compares the Roman bridge across the Danube, one of the boldest of their works, with the modern structures on the Po. The former—1,207 mètres (3,960 feet) in length—had twenty-one wooden arches of 50 mètres (164 feet) span; and the piers—founded on a masonry platform extending right across the river bed—had a thickness of 17·7 mètres; while the piers of the latter, though 28 mètres high from the foundation, are less than 3 mètres thick at the top. The ancient piers had six times the thickness required for a modern girder bridge, and three times what would now be allowed for masonry arches of 50 mètres span. The same immense piers were built throughout the middle ages; the old bridge at Verona, for instance, with two arches of 21·54 mètres and 48·70 mètres (93½ and 160 feet), has a pier 12 mètres thick, though only 3·50 mètres high.

The author proceeds to point out the superiority of the modern system of long spans and narrow piers, in leaving the channel free for navigation and the discharge of floods, and avoiding the scouring action caused by obstacles to the natural flow. In some cases old bridges have so impeded the flow as to cause serious inundations above bridge.

The ironwork of the great bridges over the Po was imported from abroad, but the Italians are now constructing their own, some spans of 75 mètres (246 feet) having been already built, and others of larger dimensions, up to 100 mètres, will shortly be commenced.

The author states that, with few exceptions, only one type of bridge—the lattice-girder—is constructed in Italy, and regrets that little encouragement is given to improvements in design. He mentions a few arched bridges, among them being that over the Celina torrent, which he considers one of the best examples.

The author proceeds to discuss the subject of the incalculable strains to which bridges are liable; from the points of support not being knife edges, as theory supposes; from the vibrations in cross sections; from the vibration caused by passing trains, &c. Airy attempted to ascertain the strain in a bar of iron from its musical note, but the result was not satisfactory. Better results are obtained by instruments for measuring the contraction and elongation of bars during strains, such as the apparatus of Dupuit and Manet in France, and Castigliano's multiple micrometer, which the author describes.

The experiments made with Dupuit's apparatus upon all kinds of girders show that the actual maximum strains are in general less than the calculated, particularly in arches and in the horizontal members of straight girders. Iron bridges are also exposed to danger from corrosion, but the author states that Mallet's experiments proved that an iron bar 6 millimètres (0·238 inch) in thickness would not be destroyed in less than 700 years.

The author then gives particulars of some of the principal brick and stone bridges recently erected. Comparing modern with ancient structures, he points out that the former are built with one-third less material than the latter. In ancient structures the ratio between the thickness of the piers and the span varied from one-fourth to one-half, while in modern it has been reduced to one-sixth, and even one-seventh. The average ratio between the thickness of the arch at the crown and the span was 0·086, while in modern bridges it is from 0·040 to 0·031.

The two principal arched bridges erected in Italy during the last few years are the Ponte Annibale and the Ponte del Diavolo. Each of them has a span of 55 mètres (180 feet), and thickness at the crown of 2 mètres, the versed sine of the former being 14 mètres, of the latter 13·55 mètres. Circular openings 9·25 mètres in diameter are introduced to lighten the haunches. These are the largest masonry arches in the world, with the exception of one at Chester of 61 mètres span, and one on the Washington Aqueduct in America of 67 mètres. In the year 1370, however, an arch of 72·25 mètres (237 feet) span, and 20·70 mètres rise, was erected over the Adda, at the Castle of Trezzo. This arch was considered the eighth wonder of the world, both for size and for the short space of time—seven years and three months—occupied in its construction. The Ponte Annibale and the Ponte del Diavolo were built in twelve and ten months respectively. Among recent improvements in detail the author mentions the use of hydraulic lime and cement, which allows the centres to be struck very shortly after the completion of the arch; and the use of sand-boxes instead of wedges for slacking the centres, a system which he strongly recommends.

The two above-named bridges were built almost entirely of brick, great economy being thereby effected as compared with stone. The Chester bridge, of 61 mètres span, cost 83*l.* per square metre of roadway; the Ponte Mosca at Turin, of 45 mètres span, cost 105*l.* per square metre of roadway; whereas the Ponte del Diavolo cost only 34*l.*, and the Ponte Annibale 24*l.* The author concludes by predicting that the limiting span of brick and stone arches has not yet been reached, and anticipates the erection of spans of 100 mètres.



## THE AMENDMENT OF THE LAW OF LIGHT AND AIR.\*

PRIOR to the Prescription Act 2nd and 3rd Will. IV. c. 71, sect. 3, the right of the dominant owner was not recognised by statute, but depended only upon prescription as recognised by the common law. The common law rights to easements of light and air have been the subject of actions in our courts of law from a very early period, an example of which is found in the group of cases temp. Jac. I., in one of which it appears that the court ordered the partial removal of some buildings which had been erected by a servient owner, and which had interfered with the free flow of air to a windmill. In another case the total removal of buildings was ordered upon similar grounds. There are also in the old reports cases as to light which show the antiquity of the rights given to dominant owners; but these rights arose under a condition of things, both as to density of population, habits of the people, and otherwise, very different to the present. Doubtless, prior to the Prescription Act, the rights to light and air were more difficult of proof, and the Legislature by that statute has conferred on persons claiming as dominant owners considerable benefits which they had not theretofore enjoyed, especially in respect of the easement of light; and they, as a class, have not failed, down to the most recent times, to assert their rights over servient owners in a manner which in many cases has worked great injustice. The system of letting lands in cities and towns for building purposes has been so largely developed since 1832 that an extensive class of persons, both occupiers and owners, exists, of which the members are entitled to claim certain rights, in respect of dominant tenements, such as could hardly have been contemplated by the Legislature when it passed the Prescription Act. It cannot be doubted that servient owners desiring to build have in many cases to submit to extortion and oppression at the hands of owners of dominant tenements whose ancient lights are practically worthless. The servient owner appears in the character of a conquered foe, who must submit. In natural justice, apart from custom and legislation, the rights of the two classes appear equal; and the mere fact of diligence to build ought not to give one owner power and rights over the lands of another for which he has not only paid nothing, but, on the contrary, the very building in respect of which his claims arise may be in itself a serious disadvantage to his neighbour's land. Upon reviewing the decisions of the courts since the passing of the Prescription Act, it is evident that the judges have evinced great and increasing consideration for the rights of dominant owners. For instances of this I would refer to—

The doctrines relating to the acquisition of a prescriptive right to a special light for special business (*Yates v. Jack*, and *Lanfranchi v. Mackenzie*, *Hesty v. Union Bank*).

Power to enlarge ancient lights (*Jones v. Tapling*, and other cases).

Obtaining increased light and air by removal of obstructions in window (*Turner v. Spooner*).

Extra light acquired by dominant owner in lieu of light in the ancient direction. No answer to claim (*Dyers' Company v. King*).

Proof of pecuniary loss by dominant owner not essential. Interference with comfort sufficient. Non-user for several years not material (*V.-C. Wood in Dent v. Auction Mart Co.*, followed to some extent by *V.-C. Kindersley in Manton v. Headon*).

Many other illustrations could be given. The present state of the law, as interpreted by judicial decisions, appears oppressive both in respect of actual loss sustained by servient owners and of the difficulty in carrying out proper plans for building. Whether, seeing that dominant owners have enjoyed certain rights in this country for many generations, an attempt to assimilate our laws to those of France, certain of the United States of America, and other countries, by greatly reducing the rights of the dominant owners, would be successful, it is impossible to say; but it is certain that some important changes in the law are most essentially needed, and these might be so framed as to prove of great benefit to our cities, and to remove what is always a great source of litigation, anxiety, and injustice. The present inquiry may be useful in devising remedies which, without taking away any of the rights which ought properly to be enjoyed by the owners of property so long as the principles of the present law are maintained, should protect servient owners, and, in the interests of the public generally, permit the erection of buildings unimpaired by the opposition of persons who have scarcely more than a technical right to require that the servient owner should shape his buildings according to their dictation.

Doubtless the Council will receive many practical suggestions as to the rules by which the provisions of the Public Health Act and the Metropolitan Management Act, with reference to the width of streets, height of buildings, and the air space to be left between and around large buildings, might be supplemented, so as to afford to the occupants of the houses the highest amount of light and air compatible with a due regard to the proprietary rights of the owners.

\* A communication by Mr. J. J. Darley, addressed to the Special Committee of the Royal Institute of British Architects.

The existing machinery by which the rights of the parties when in issue are defined would, but for the full occupation of the courts of justice on other business, probably afford a speedy and efficient though costly remedy. In the present state of business in the courts if a question of light and air is not decided in a summary way upon injunction, great delay ensues, and much uncertainty is cast upon owners of property pending the decision as to their rights; and as to the question whether the building, if continued, may not have to be either demolished or reconstructed. In view of this difficulty, it will no doubt be in the experience of most architects that every effort is made to buy off the dominant owners rather than incur the expense of litigation; and in the great majority of cases such owners receive compensation, and succeed in securing alterations in the intended construction of the new building, when, if their cases had been decided by a tribunal, they would have got nothing, or only a nominal sum by way of compensation for an easement the damage to which is so small as to be unappreciable. It is true the Act of 21 and 22 Vict. chap. 27, gave power to the Court of Chancery to award damages in addition to or substitution for any injunction or specific performance claimed in respect of the commission or continuance of any wrongful act, and the judges have frequently exercised that power. It may, however, be observed that this Act is more frequently of assistance to the owner of the dominant than to that of the servient tenant, as damages are occasionally given in cases where an application for an injunction would almost certainly fail. I venture to think, in case a bold attack upon the existing principles of the law upon light and air is deprecated by the Council, that the following suggestions might be found to apply some remedy to acknowledged mischief without trenching upon ground likely to provoke suspicion and hostility in Parliament:—

1. That the plaintiff in any action or proceeding to restrain or recover damages for any infringement of his right to light or air shall be allowed no costs against the defendant, unless he shall recover at least 50% damages, or the Court shall otherwise order. The amount here selected is intended to exclude those cases where damage is done, but not enough to justify or account for a *bond fide* resistance. It is true that, by Order LV., Rule I., of the Rules of the Supreme Court, all costs are now in the discretion of the court, but the suggestion here made is intended to supply a rule for the court's guidance which would have the effect of altering the existing practice.

2. That the plaintiff shall not be entitled to restrain the progress of any building by injunction unless the rent of the dominant tenement, in respect of which he claims, amounts to 50% per annum. Opinions may differ as to the amount to be fixed.

3. That, in the absence of express agreement, the builder or tenant of any building shall not acquire any right of easements of light or air as against the owner or tenant of any other building erected upon land belonging to the same owner. This may be effected by the following clause, which Mr. Cates lately informed the Institute is in common use upon an important building estate with which he is acquainted, namely:—

Provided always, and it is hereby agreed and declared, and this demise is made upon the express condition, that the said lessee, &c., shall not, by virtue or in respect of this present demise, be deemed to have acquired or to be entitled to, neither shall he or they, during the existence of the term hereby granted, acquire or become entitled to by length of enjoyment, prescription, or by any other means whatsoever, in respect of the premises hereby demised, any right of air or light or other easement from or over or affecting any land or hereditaments belonging to the lessor not comprised in this demise. But, on the contrary, it is agreed and declared, and the said lessee doth hereby covenant and grant with the lessor, &c., that it shall be lawful for the lessor and his or their grantees, lessees, or tenants, at all times hereafter to erect any new buildings of any height on any land belonging to the lessor not included in this demise, and to raise to any height or alter any buildings not existing, or to be hereafter erected, on any such land as last aforesaid, whether any such buildings or alterations as aforesaid may or may not prevent, obstruct, or affect the passage of air or light to the premises hereby demised, or any part thereof, or to any new building which may hereafter be erected on the land hereby demised.

One of the most eminent judges on the bench has expressed his approval of the introduction of this clause into building leases. There would therefore seem to be little objection to implying it by statute in the absence of a contrary intention.

4. Statutory recognition might be given to some defined angle of incidence up to which limit building might be permitted in all (or at least all but very special) cases. It is probable that 45° will be generally regarded as fair to both sides.

5. A suggestion has been made by Mr. T. Roger Smith which seems eminently worthy of attention. With some modifications, which I venture to suggest, it is to the following purport:—"Every building owner shall be allowed, before beginning to build, to notify his intention by advertisement and by notice affixed to the building, and served on the occupiers of adjacent tenements, and by deposit of plans in some neighbouring public place—such, for example, as the office of the Local Sanitary Authority, or, in the case of the metropolis, the offices of the Metropolitan Board of Works, and under the charge of some public officer or authority for a definite period (probably about two months would suffice, but say three), and during this period he should acquire no right to go higher than



before; but if no protest is lodged at the end of this time he is to have a right to carry out his deposited plan. Within the period to be specified by law for the purpose, any owner of a dominant tenement may lodge a protest accompanied by a claim for compensation; the building owner shall then be entitled to make a survey of the dominant tenement, and if he then pays this claim, all rights of the claimant shall be extinguished so far as the rights of the dominant tenement are concerned. If he pays the amount into the Court of Chancery before any light is interfered with, he is also to be at liberty to go on, subject to the result of an inquiry. If he declines any of these courses, he is not to be at liberty to go on beyond the old height till an inquiry has been held and the compensation been assessed and paid, or, if the result should so happen, an injunction may be granted to restrain him altogether from proceeding further. The mode of making such inquiries should probably be subject to the direction of the Chancery Division; the expenses should, of course, be borne by the building owner, and the usual 10 per cent., as in the case of a compulsory sale, might be added to the amount assessed by way of compensation. Exorbitant claims might be discouraged by requiring the claimant to pay all costs, whatever the result."

6. If the proposals for placing London under a new scheme of local government should be carried out, it might be advisable to entrust a committee of the governing body with a primary jurisdiction, either (1) over the whole subject of easements of light and air, or (2) only so far as to decide in each case whether it is a proper one for an injunction. The appeal would be to the High Court. If the plaintiff should fail to obtain an interim injunction, he should afterwards obtain only money compensation if successful in his action. In conclusion, I would again state my conviction that new legislation upon the subjects of light and air is imperatively needed, and that if a firm and just measure can be passed, it would be hailed with satisfaction by the public.

### INIGO JONES.

THE Society for Photographing Relics of Old London has this year flown at higher game than formerly, and the plates presented to subscribers are of surpassing interest. They are mainly after buildings by Inigo Jones. The attention which has been excited by the proposal to remove Ashburnham House makes the seven plates of Ashburnham House most opportune. The first is taken in Little Dean's Yard, and shows a part of the exterior; but in addition it represents a rather picturesque collection of roofs and chimneys, with the south transept of Westminster Abbey soaring above them. In the next plate we see the front of Ashburnham House, which is a plain building with an upper storey of a later date. The architectural merit is confined to the interior, of which there are four photographs. The staircase forms the subject of two; another gives the fine doorway of the ante-room with its three-quarter Ionic columns, which, it may be noted, are cabled for about half the height. The head is filled with carving, which appears to be less delicate in character than most of the detail. An excellent plate is made out of the end of the dining-room, but the alcove is supposed to have been designed by an artist who lived at a later time. The arch is very flat, and does not seem to spring from the columns. Another photograph represents a part of the garden having a summer-house, with Tuscan columns, and of good proportion. Doubts have been raised as to the authorship of Ashburnham House, and accordingly Mr. Marks, the enthusiastic secretary of the Society, undertook the task of searching after Jones's designs, and with the following results:—

The design of Ashburnham House has been denied to Jones and claimed for Webb; that of the Water Gate of York House has been claimed for Nicholas Stone. In the hope of finding evidence with respect to these and other works ascribed to Jones, I sought permission, which was in each case most readily and courteously granted, to examine the collections of this architect's drawings in the possession of the Duke of Devonshire and of Worcester College, Oxford. These, with some drawings for Whitehall in the British Museum, and a few drawings on vellum of the same subject in the library of Windsor Castle, comprise all the known collections of Jones's designs. By some singular fatality they contain scarcely anything which can certainly be referred to designs known or believed to have been actually carried out by Jones. Drawings, indeed, of the Banqueting House, a part of the projected Palace of Whitehall, are frequent; but one finds no large-scale drawings of the Banqueting House itself; nothing of Shaftesbury House, nor of Ashburnham House, of Lindsey House, of the adjoining houses on the west side of Lincoln's Inn Fields; nothing of the chapel of Lincoln's Inn, nor of the Piazza, Covent Garden. The designs (at Worcester College) for the portico of St. Paul's Cathedral, and for St. Paul's, Covent Garden, are not those which were carried out. The latter, indeed, mentioned by Peter Cunningham in his "Life" (as both Allan and Peter wrote a "Life" of Jones, it is necessary thus to distinguish), I could not identify. Of York House there are known only, at Worcester College, a richly-gilt drawing, unlike any other known drawing of Jones's, for, or more probably from, a ceiling which can be allotted to York House by the appearance on the design of the Duke of Buckingham's motto, *Fidei Coticula Crux*. At Devonshire House there is a drawing comprising a plan and elevation of the Water Gate, the date on which, 1641, forbids us to accept it as anything more than a drawing from the executed work. Of Wilton House there are

only, in the two collections, designs of singular beauty for ceilings; of the Theatre of Barber Surgeons' Hall and of Somerset House there is only a small ground plan of the former. These uniform blanks suggest that the acceptance and execution of a design involved the destruction of the original drawings, for though Jones's drawings have been divided, dispersed and perhaps in some considerable measure destroyed, it would appear that something more than coincidence is necessary to account for the remarkable deficiencies cited above.

The photograph of the Banqueting House which is given is the best we have seen, and one of the Water Gate, reproduced from a negative by Mr. Strudwick, shows the structure before it was partly buried by the formation of the public garden. The remaining photographs are of some of the fine houses on the west side of Lincoln's Inn Fields which were designed by Jones. One is added of Newcastle House, at the corner of Queen Street, which is the work of Captain Wynde, a Dutchman, who was Jones's executor. At present it forms two properties, and the doorway, by a difference in the colour, indicates this; but in the early part of the eighteenth century, before alterations were made in the approach, the building must have been one of the stateliest mansions in "the Fields."

The exertions of the Society to ensure faithful records of the old London buildings are well deserving of encouragement. How the Society is carried on is a mystery, for the production of so many splendid photographs cannot leave balance for the expenses of management. The plates have been prepared in the best style by Mr. Dixon.

### THE LATE MR. A. GILMAN.

ONE of the best-known architects of New York, Mr. Arthur Gilman, died lately. The *American Architect* says that although the most active portion of Mr. Gilman's career was past, he had occupied a conspicuous position in the profession both in New York and Boston, where he practised until within some fifteen or sixteen years. According to his own account, he was intended for the ministry, and was carefully educated at the Dummer Academy and at Trinity College, Hartford, but his active and enterprising temper soon inclined him to more worldly pursuits, and he adopted the profession of architecture, which at that time, and in America, was much less popular among highly-trained young men than it has since become. In 1844 he published in the *North American Review* an article on American architecture, attacking the Greek classicism, which was then in vogue, and predicting its downfall before the Gothic movement which was just beginning to show its strong vitality in England. The article attracted much attention both in America and in Europe, where it was translated into several different languages, and Mr. Gilman was invited to deliver a course of lectures in Boston on his favourite theme. At their conclusion he went abroad for study, receiving marked attention from the best English architects of that time, as well as from literary men and artists. Some years later he was called in consultation on the subject of the improvements to be made in the "Back Bay" district of Boston, then an unwholesome marsh. His taste for grandiose disposition found there an excellent field, and to his persistency in urging his views upon the commissioners who controlled the work is due the adoption of a scheme which has made of a very unpromising territory the finest quarter of Boston, and one of the most beautiful urban regions of the world.

While these improvements were in progress Mr. Gilman, with his partner Mr. Bryant, carried out several fine buildings in and about Boston. Although he never pretended to skill as a draughtsman, he was very familiar with the best examples of his favourite Renaissance, in detail as well as in general disposition, and handled these elements through his subordinates with a success which was probably due as much to his remarkable memory as to his highly cultivated taste. His most important work was the Boston City Hall, which, although rich and quiet, is in our judgment a work of much less artistic value than the First Church on Arlington Street, the Brewer-Beebe houses on Beacon Street, or some other buildings of less pretension. In 1865 he removed to New York, where he was much employed in private work, and in connection with Mr. Edward Kendall devised the magnificent, if hardly legitimate, façade of the Equitable Life Assurance Company's building on Broadway. About the same time he executed an important church on Staten Island—St. John's Church, Clifton, if we remember rightly—and began a very large one in Buffalo, which we think is not yet entirely finished. As he advanced in life, the enthusiasm which made him one of the first and most active members of the American Institute of Architects seemed to abate, partly, no doubt, on account of his rather delicate health, and partly by reason of the incessant demands made upon his time by general society, in which he was always extremely popular; but he will long be remembered in the profession as well as among the innumerable friends who delighted in his brilliant conversation and amiable manners.

A New Hospital is to be erected in Queen's Park, Glasgow, which is to cost 20,000*l*. A premium of 50*l*. will be given for the approved design.



## NOTES AND COMMENTS.

THE following is a *résumé* of the regulations for the new Triennial Exhibitions in Paris, of which the first will be held from September 15 to October 31, 1883, and be open to the most remarkable productions of French and foreign artists executed since May 1, 1878. The works admitted will include (1) paintings, drawings, water-colours, miniatures, enamels, &c., to the exclusion of objects having an industrial or simply decorative character; (2) sculpture, engraving on medallions and precious stones; (3) architecture; and (4) engraving and lithography. On the other hand, are excluded all copies, even when they introduce a work under a different form; unframed paintings and drawings, and anonymous works. The number of works that may be presented for admission by each artist is unlimited; the total number that may be admitted by the jury being fixed at 1,000 for the painting and drawing section, 300 in sculpture, 50 in architecture, and 150 in engraving, &c. Artists must send in to the General Offices of Fine Art Exhibitions at the Palais de l'Industrie during the month of January 1883 a signed notice descriptive of the works executed since May 1, 1878, which they are desirous of exhibiting; this short notice must contain the title and dimensions of the work as well as details of the Exhibitions in which it has already appeared. During the month of March the admission jury will examine these notices, and draw up a list therefrom of works that need not be deposited before August 1. Artists who have not received before April 1 a communication informing them that their exhibits are on this list must send in their works for examination between July 10 and 20. The jury will be composed of members nominated by the Académie des Beaux-Arts and by the Government. It will be divided into four sections corresponding with the categories above enumerated, and be presided over by the Director-Général des Beaux-Arts. The Exhibition will be open every day from 9 A.M. to 8 P.M., except on Mondays, when the doors will be thrown open at midday only. The entrance price is to be 2 fr. up to noon, and 1 fr. after; on Sundays it will be free from 10 A.M.

THE jury of the Vienna International Exhibition of Fine Arts has finished its labours, with the result that France bears off the palm in this contest. Medals have been awarded to MM. JACQUES BAUDRY, WILLIAM BOUGUEREAU, C. BRUYÈRE, C. CHARLAIN, P. DUBOIS, H. HARPIGNIES, A. HUST, and JEAN IDRAC. Germany secured seven medals, Austria five, Belgium three, Spain two, and each of the other countries represented in the competition one.

IN the competition for the Grand Prix de Rome (architectural section) the first Grand Prix was carried off by M. ESQUIÉ, born in 1853, pupil of M. DAUMET; and the two second Grand Prix by M. TOURNAIRE, born in 1862, pupil of M. ANDRÉ; and M. COURTOIS-SUFFIT, born in 1856, pupil of MM. SUFFIT & PASCAL.

A COMMISSION of engineers and architects last week visited the ruins of the Palais de la Cour des Comptes, on the Quai d'Orsay, Paris, in order to examine and report upon their present condition. It was found that the greater part of the walls are solid enough to be included and utilised in the construction of the new Museum of Decorative Art which it is proposed to erect with the proceeds of the lottery lately authorised for the purpose by the Government. It is expected that a considerable saving may thus be effected in the cost of construction.

THE regret will be general at the announcement of the resignation of Lord TALBOT DE MALAHIDE as President of the Royal Archæological Institute, an office which he has held for thirty years. During that time there have been many ebbs and flows in the interest taken in archæology; but there has been no variation in the tact with which Lord TALBOT DE MALAHIDE conducted the affairs of the Institute. His lordship has always been most ready to allow others to bring forward their speculations, and has rarely interfered in debates, although there is no doubt of his mastery of the subject. It will be difficult to find a successor with equal qualifications for the office, and yet willing to repress himself like Lord TALBOT DE MALAHIDE. But, true to the old motto of his house, his lordship has said that he will not leave the Institute in a difficulty, and it is to be hoped that the resignation may be reconsidered.

AN important case was decided by Mr. Justice FIELD on Wednesday. On January 18, 1881, there was a high tide in the Thames, the graving-dock belonging to two of the dock companies overflowed, and a building estate belonging to the plaintiff at Silvertown was flooded. The buildings were much injured and were rendered almost uninhabitable, so as to seriously lessen their value; the building materials were washed away or rendered useless; the houses were flooded to the depth of several feet, and remained so for some time; whereby they were structurally injured and impaired; and so the plaintiff's property was depreciated and the land was for the time rendered unsaleable. The damages were said to amount to 9,000£, but the parties had agreed that, in case the Court should decide in favour of the plaintiff, the amount of damage should be referred to an arbitrator. It was contended that the dock companies, having made an artificial basin for preserving the water to suit their own purposes, were bound to protect their neighbours against any damage arising from that storage of water, and that they had been ordered by the Dagenham Commissioners, who had superintendence of the waterway in this district, to raise their dock wall to the extent of 5 feet above Trinity high-water mark. The plaintiffs maintained that the walls had been raised to the satisfaction of the officer of the Commissioners, that the tide was exceptional in height, and was accompanied by a hurricane. Mr. Justice FIELD said that the walls might have been raised, but it was possible that they had subsided. It was not plain that proper clay had been used, and as there was no evidence to show that houses or chimneys had been blown down, or that any unusual damage had occurred, his Lordship could not come to the conclusion that the weather was of such unusual severity as to prevent a reasonable man from expecting it to occur, and the accident certainly could not be brought under what was called the act of God, so as to exempt the defendants from liability. The amount of damage will be decided by arbitration.

THE question of the gas supply is now debated in Paris. About two years ago the Paris Gas Company endeavoured to obtain from the city authorities a forty years' renewal of its concession from the city. In exchange for this it was offered to reduce the price from 30 cents, the present rate per cubic metre, to 25 cents for all gas consumed through burners, and to 20 cents for that used in motors. The Prefect of the Seine and the Government officials are in favour of making a bargain with the Company on these lines, limiting, however, the period of prolongation to twenty-five years. On the other hand, the Highway Committee, to which the scheme was referred for consideration by the Municipal Council, has reported in favour of its absolute rejection, and recommends that the future price of gas shall be arbitrarily fixed at 20 cents per cubic metre all round, by a simple decree of the Prefect, approved by the Council. A third proposal comes in the shape of an amendment, presented by M. EDOUARD HERVÉ and M. IVES GUYOT, and by which the price would be reduced to 25 cents at once, and by successive stages within five years to 20 cents. This attempt at a compromise, though powerfully supported, will probably rest without effect, for the Council seems fully determined to reject the company's proposals, and in that case a great struggle will take place in the law courts at the expense of the gas consumers and rate-payers.

MR. BRET HARTE, who represents the United States in Glasgow, has sent a report to the State Department on the difference between the flats in Glasgow buildings and those in American cities. It is pointed out that the builder, who usually has acquired a piece of ground on condition of payment of an annual ground rent, must have carefully-prepared plans of his proposed apartment house, showing number of rooms, their arrangement, and plans of the plumbing and drainage, to be submitted for approval to the proper authorities before building can be begun, and after the plans are approved the process of building is inspected by the officials. When completed the house is sold in flats or apartments, each purchaser obtaining a right to the common stairs, to washing and cellarage accommodation, and agreeing to bear his proper proportion of the expense of upholding the roof and keeping in repair the pavements, railings, causeway, water pipes, and common sewers. Taxes are assessed on each flat according to its relative value. The purchasers become absolute freehold proprietors, and can sell, mortgage, or let their flats.









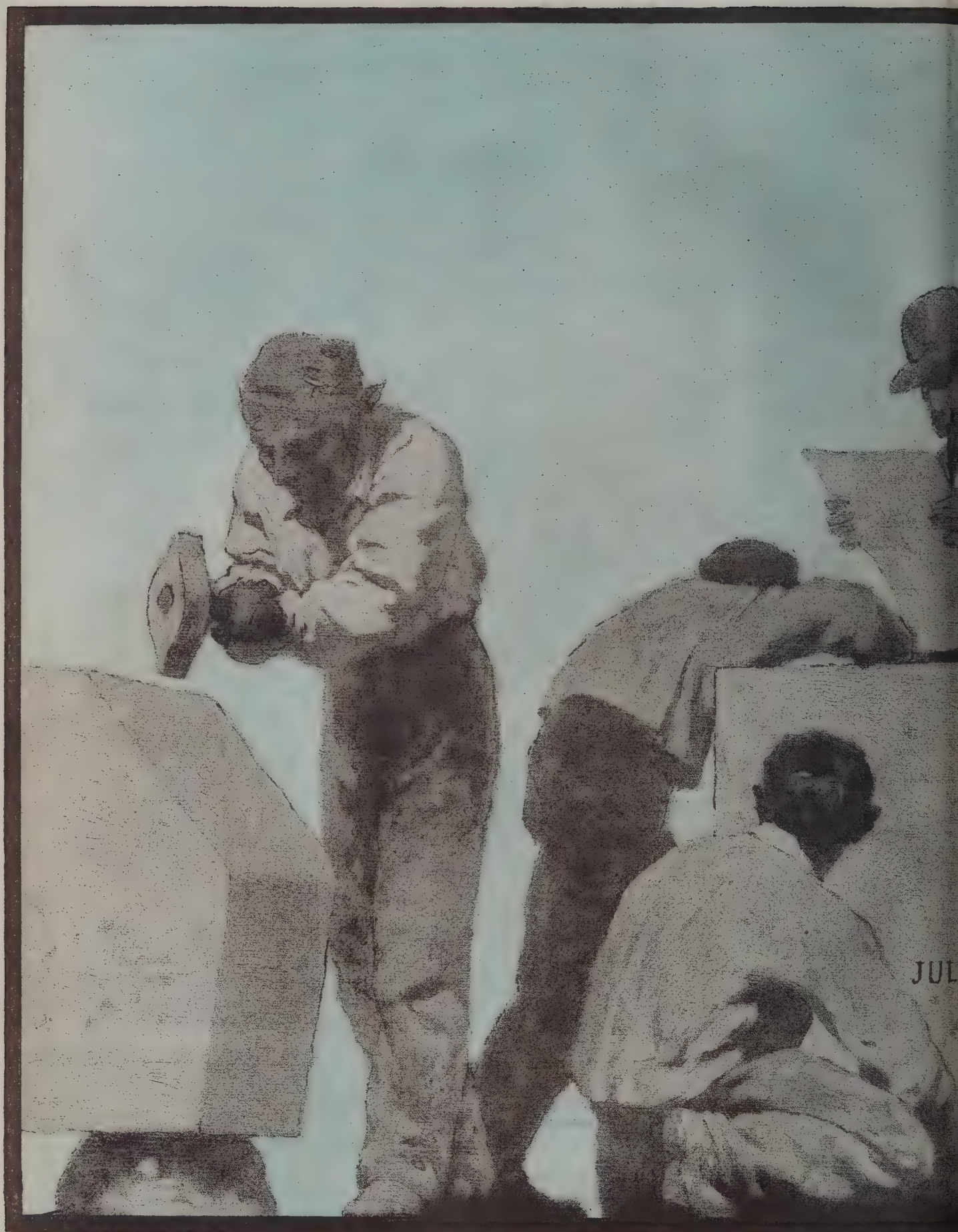
HASLEMERE, SUTTON, SURREY.

Engraved by J. H. P. & Co. from a drawing by J. H. P. & Co.









*Lague & Co* 22, Martins Lane, Cannon St EC

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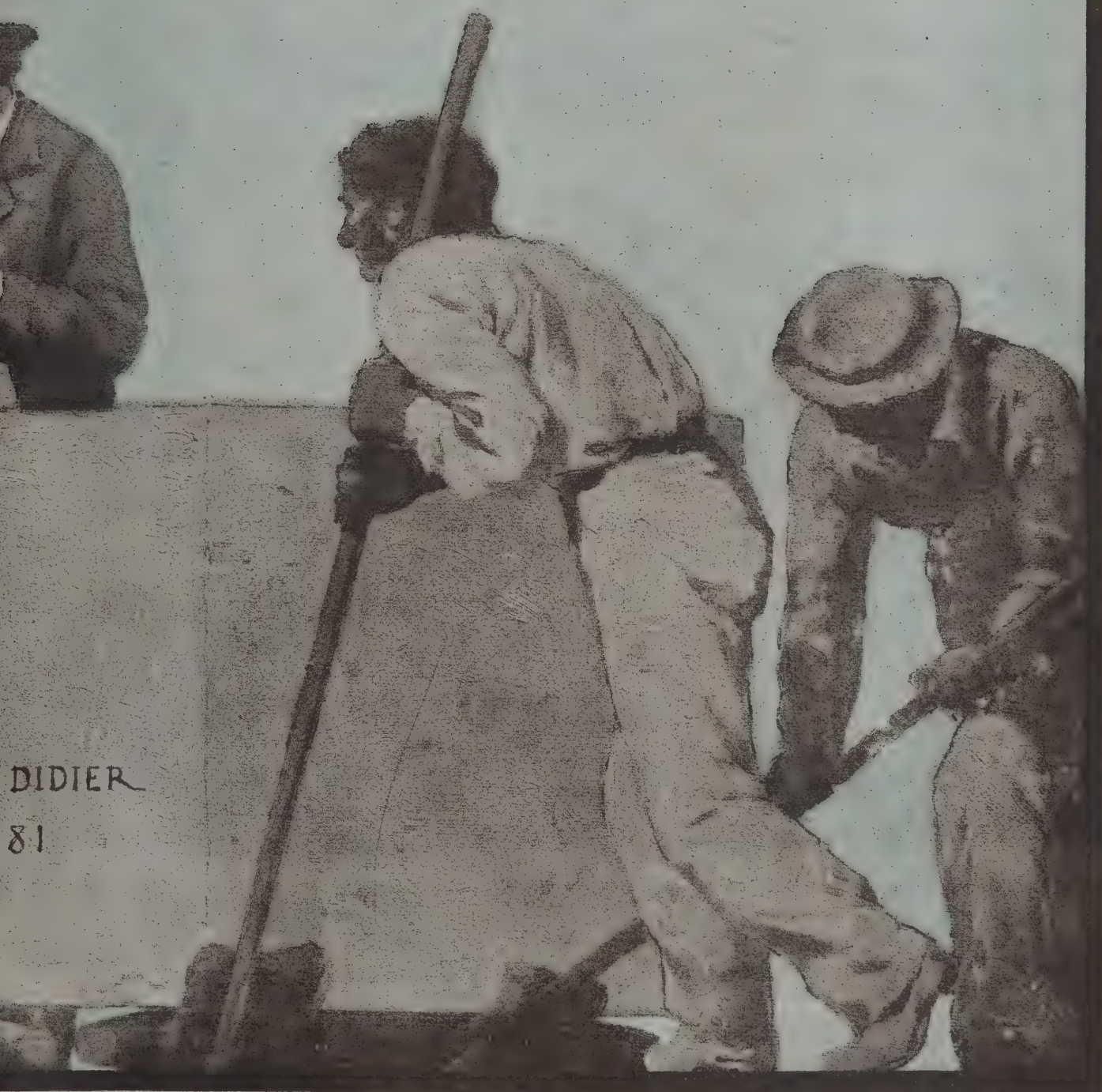
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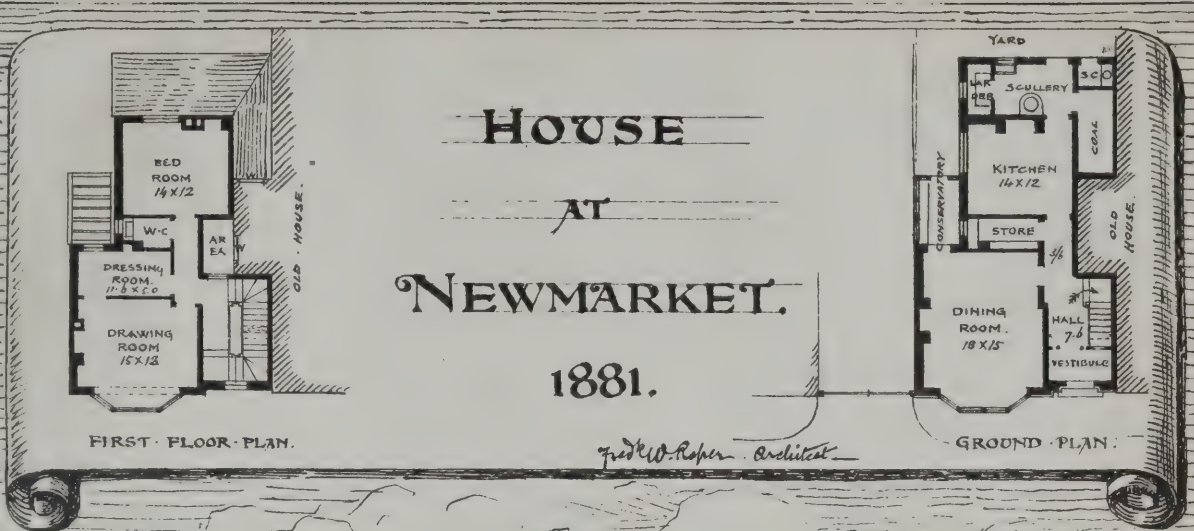
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## ILLUSTRATIONS.

AGRICULTURE, A DECORATIVE FRIEZE: CONSTRUCTION.

## HOUSE AT NEWMARKET.

THIS house, which we illustrate, has been built in High Street, Newmarket, of materials from the neighbourhood. Red brick and tiles were used for the walls and roof; and timber-work, with rough-cast between, for the bay window and gables. Stabling has been built at the back of the house to accommodate twelve race-horses. Local tradesmen were employed, and the architect was Mr. FREDERICK W. ROPER, of 9 Adam Street, Strand.

## "HASLEMERE," SUTTON, SURREY.

THIS illustration represents the easterly front of a house now being built by Mr. W. SHURMUR, from the designs of Mr. HERBERT D. APPLETON, A.R.I.B.A., of No. 264 Wool Exchange, Coleman Street, E.C., for the sum of 2,484*l.* The walls are of Fareham bricks, with Ockley hanging tiles, and the roofs covered with Broseley tiles—the half-timber work to be Stockholm, tarred.

## GLASGOW INSTITUTE OF ARCHITECTS.

THE members of the Glasgow Institute of Architects held their annual excursion on the 3rd inst., the place of rendezvous being Dunfermline. Among the members present were Messrs. James Sellars, vice-president; John Baird, past president; Campbell Douglas, past president; William Leiper, F.R.I.B.A.; Alexander Petrie, T. L. Watson, John McLean, William Forrest Salmon, F.R.I.B.A.; James Morris, A.R.I.B.A.; and William McLean, secretary. The party arrived in Dunfermline, having travelled by rail, at 11.45, and were met by Mr. G. Robertson, F.S.A. Scot., and Mr. A. Blair, artist. They first visited the Abbey and Palace ruins, spending a good deal of time in the study of the details of the various styles of architecture. Some of the members of the party seemed to be much struck with the fine specimens of Anglo-Norman and Gothic architecture which are to be met with in connection with the old Abbey Church. The porch at the north doorway came in for a large share of attention. The doorway is of later date than the original part of the church, and has a beautifully groined ceiling, with ten sculptured keystones, containing, among other devices, two defaced shields. The heavy Norman pillars on each side of the nave were also closely inspected. In the course of the day the excursionists drove to Pitfirrane, Broomhall (the seat of the Earl of Elgin), Rosyth Castle, and Inverkeithing. On returning to Dunfermline about 5 p.m., the entire company dined in the City Arms Hotel, starting for home at seven o'clock.

## BOARD SCHOOLS IN GREAT BRITAIN.

THE report of the Committee of Council on Education for 1881-82 states that the schools in England and Wales visited by the inspectors for the purpose of annual grants, which in 1869 provided for 1,765,944 scholars, or for 8.34 per cent. of the population, were in 1881 sufficient for 4,389,633 scholars, or 16.85 per cent. of the population. The additional amount of accommodation in aided schools which has thus been provided since the passing of the Education Act of 1870, to the extent of 1,429,421 seats by voluntary effort and 1,194,268 in Board schools, has been supplied in several ways.

In the eleven years ending December 31, 1881, building grants to the amount of 312,020*l.* have been paid by the Education Department, on the completion of the erection or enlargement of 1,571 schools and 933 teachers' residences, affording new or improved accommodation for 279,874 scholars. These grants have been met by local contributions to the amount of 1,346,887*l.* The average cost of erecting voluntary schools, with residences for the teachers, has been about 5*l.* 7*s.* per scholar. This includes, as a rule, the value of the sites, so often given gratuitously in the case of schools of this class.

The whole of the 3,342 applications for building grants made in 1870 have now been disposed of. In 1,633 cases grants have been paid to the amount of 268,724*l.* 16*s.* 2*d.*; 376 have been rejected; and 1,333 have been withdrawn. About 216,000 additional children have been efficiently provided for with the aid of these grants, and as the schools must be conducted as public elementary schools, they will all come under inspection, and must be placed under the charge of certificated teachers.

In the case of a large number of schools which have been enlarged or improved, without Government aid, certificated teachers have been appointed, and annual grants applied for on their behalf.

The school boards have availed themselves freely of the power of borrowing on the security of the rates, given by the Acts of

1870 and 1873. Up to April 1, 1882, the Government had sanctioned 5,011 loans, amounting to 13,784,694*l.* 1*s.* 9*d.*, to 1,637 school boards, by means of which new accommodation will be furnished for some 1,124,524 scholars. The estimated cost per child is thus about 12*l.* 5*s.* 1*d.*, including cost of site; but the amount of the loan applied for is generally somewhat in excess of the sum eventually spent. The school boards have also acquired a considerable number of schools, either by arrangement with private owners and managers, or, where the premises were held in trust for educational purposes, by transfer under the section of the Act of 1870 specially framed to meet such cases.

In Scotland during the period from 1839, when the administration of the Parliamentary vote was entrusted to the Committee of Council on Education, to December 31, 1881, grants to the amount of 665,961*l.* have been paid in aid of erecting 968 residences for teachers; and of building 1,367 new schools for 279,051 scholars, and enlarging or improving 484 schools for 53,083 scholars—or for 332,134 scholars in all. For 72,081 of these scholars accommodation was provided by voluntary effort, in 422 new and 128 improved schools, at a cost to the promoters of 230,122*l.* 14*s.* 8*d.*, and to the State of 109,411*l.* 3*s.* 1*d.*; or at the rate of about 4*l.* 14*s.* 2*d.* per scholar. But the greater part of this provision has been made since the passing of the Act of 1872, during which period grants to the amount of 556,550*l.* have been paid to School Boards for the erection of 945 new and the enlargement or improvement of 363 old schools, and for 730 teachers' residences. With the aid of these grants, met by local expenditure from the rates, to the amount of 2,031,247*l.*, accommodation has been provided for 260,053 children, at a cost of 7*l.* 16*s.* 3*d.* per scholar from the rates, and of 2*l.* 2*s.* 10*d.* from the Parliamentary grant; or at the rate of 9*l.* 19*s.* 1*d.* per scholar.

## ART AND INDUSTRIAL EXHIBITION, MANCHESTER.

IT is proposed to hold an exhibition in St. James's Hall, Manchester, during October and November next, which will be under the patronage of the Earl of Wilton (president), the Earl of Derby, the Earl of Sefton, Lord Egerton of Tatton, Lord Randolph Churchill, M.P., Lord Combermere, Lord Harrington, the Hon. Wilbraham Egerton, M.P., Sir Humphrey de Trafford, Bart., Sir W. T. Charley, Q.C., D.C.L., Messrs. Jacob Bright, M.P., B. Armitage, M.P., and A. Arnold, M.P. Many of the leading London and provincial firms will be represented, including amongst others Messrs. Gillow, of London and Lancaster, Messrs. Morris & Co., the Venice and Murano Company, and Messrs. W. B. Simpson & Son. Local decorative art will be represented by Messrs. Goodall, Messrs. Doveston, Davey, Hull & Co., and by Messrs. Kendal, Milne & Co. Metal work will be represented by Messrs. Elkington, Thomason, Dutton & Power, &c. The School of Art Needlework will show specimens of their work. Mr. Chas. Steinitz, of the London Parquetry Works, promises to send some fine parquetry. Messrs. Jeffrey and Messrs. Shuffrey & Co., of London, will make special exhibits of their wall papers. Pottery and porcelain will be contributed by the leading firms of the country, including Messrs. Mintons; and there will be a special show of architectural faience by Messrs. Wilcock & Co., of Burmantofts. A feature of the exhibition will be a collection of stained glass. The pictures and statuary will be placed in the new building now approaching completion. The services of Mr. Alfred Darbyshire, F.I.B.A., have been secured as art director, who will arrange and superintend the collection; and Mr. W. Ogden has been appointed to fulfil the duties of secretary.

## MR. RUSKIN AND HIS BOOKS.

THE following piece of "advice by Mr. Ruskin" forms a preface to the latest edition of his catalogue just issued:—"I have directed Mr. Allen, in this and all future issues of his list of my purchaseable works, to advertise none but those which he is able to despatch to order by return of post. The just estimate of decline in the energy of advancing age; the warnings, now thrice repeated, of disabling illness consequent on any unusual exertion of thought; and, chiefly, the difficulty I now find in addressing a public for whom in the course of the last few years of revolution old things have passed away and all things become new, render it, in my thinking, alike irreverent and unwise to speak of any once-intended writings as 'in preparation.' I may perhaps pray the courtesy of my readers—and, here and there, the solicitude of my friends—to refer, at the time of the monthly issue of magazines, to the circular of Mr. Allen, in which they will always find the priced announcements of anything I have printed during the month. May I also venture to hint to friends who may at any time be anxious about me, that the only trustworthy evidences of my health are my writings, and that it is a prettier attention to an old man to read what he wishes to say without effort, than to require him to answer vexing questions on general subjects, or to add to his day's appointed labour the burden of accidental and unnecessary correspondence?"



### THE GLASGOW MUNICIPAL BUILDINGS.

A MEETING of the Glasgow Town Council was held on Monday last, when it was reported that the following are the conditions under which the new Municipal Buildings in Glasgow have been entrusted to Mr. William Young:—

1. That he shall receive, in respect of his whole professional services and expenses as architect, a commission of 5 per cent. on the actual cost of the works executed from his designs and under his superintendence, but excluding from such cost salaries and allowances to clerks of works, measurers, and other outlays and payments which, by the practice of the profession, are excluded in fixing architects' commission, and that the amount of such commission shall be paid by instalments of the amounts after specified, viz.:—For the first year, 3,500*l.*; for the second year, 2,500*l.*; for the third year, 2,000*l.*; for the fourth year, 2,000*l.*; for the fifth year, 2,000*l.*—total, 12,000*l.* The said payments to be made half-yearly at Martinmas and Whitsunday in each year till the work is completed—which completion, it is assumed, will not extend beyond five years from the present date. On the work being completed, Mr. Young shall receive whatever balance may be due and payable to him at the time when the building is handed over to and taken possession of by the Corporation.

2. That, in addition to the commission above specified, he shall receive from the Corporation repayment of the railway fares paid by him in travelling between London and Glasgow in relation to the Municipal Buildings, but no further or other charges of any kind.

3. That he shall, with the approval of the Magistrates and Council, appoint an efficient clerk of the works, whose salary shall be paid by the Corporation.

4. That he shall submit to the Magistrates and Council the names of three measurers resident in Glasgow, and the Magistrates and Council shall select and appoint one of the three whose names are so submitted to act as measurer of the said buildings, and the remuneration of such measurer shall be paid by the Magistrates and Council.

5. That the Magistrates and Council shall be at liberty, from time to time, to ask advice from the City Architect, or any other architect or professional adviser, on all points or matters on which the Corporation may desire to be advised, both as to the design and mode of execution of the work, and to represent to Mr. Young their views and wishes in regard thereto, and he shall, so far as is practicable, give effect to such views and wishes.

6. In the event of any difference of opinion arising between the Magistrates and Council and Mr. Young in regard to any matter connected with the proposed building, the same shall be referred, at the instance of either of the parties, to Mr. Charles Barry, architect, London, whom failing, to the President for the time being of the Royal Institute of British Architects, whose decision shall be final and conclusive, and shall not be subject to review by any court or other tribunal.

The Lord Provost, in moving the adoption of the minutes, said he was aware that some of the professional journals seemed to be dissatisfied, but amongst themselves no doubt was entertained as to the fair and straightforward manner in which the competition was conducted. The minutes also showed with what carefulness the committee had proceeded to ascertain whether Mr. Young was altogether competent for the work to be performed, and he thought the Council would be satisfied they had the utmost reason to believe that Mr. Young was a gentleman into whose hands they could with perfect safety entrust these great buildings. Financial arrangements had been made with Mr. Young which his lordship thought would prove satisfactory. He need hardly remind the Council that in the earlier years of the undertaking the largest amount of expense would require to be borne by Mr. Young, and it was but right that he should then have a larger proportion of allowance. The suggestions which were made in the minutes as to measurers and other officials would also, his lordship thought, prove satisfactory. The opinion of some was that the architect himself should have the appointment of these officials, but it was deemed expedient to retain some of the power in the hands of the Town Council; and it was therefore proposed that the architect should put before them three competent measurers, one of whom should be selected by them. With regard to the exhibition of the designs, he might say that, although they had not the authority of the Town Council, they did not think it prudent to stop the exhibition, since it had been advertised. Accordingly, these designs had been on view, and during the two days of last week upwards of 400 visitors had seen them. He could not, of course, tell what impression had been created by the designs further than to say that, on the authority of an eye-witness and an ear-witness, there seemed to be a very general expression of opinion that the selection which had been made was that which the general public also would have made.

Mr. Martin said he thought the Town Council should keep the appointment of measurers in its own hands. It was not to be supposed that a stranger, comparatively speaking, should have a thorough knowledge of the measurers of Glasgow. Then, with regard to the time allowed for the exhibition of the designs, it ought to be greatly extended—say for a fortnight at least from the

present time. As to the name of the author of the designs of "Viola," Mr. Martin said he had told them that the author was Mr. Young long before the meeting in the beginning of July.

The Lord Provost thought it right to say that Mr. Barry and Mr. Young met for the first time in London. They had never seen each other before. Mr. Barry had heard of Mr. Young by name, but he had never seen him. The same remark held good with regard to Mr. Carrick. His lordship added that their interviews in London were of the most satisfactory kind, and the information furnished him was such that he had the utmost confidence in recommending his colleagues as he did that they should appoint Mr. Young. (Cries of "Agreed.")

Mr. H. S. Thompson asked why it was proposed to pay Mr. Young a commission of 5 per cent. on the actual cost of the work executed, while on other buildings the commission had been not more than 3 or 3½ per cent.

The Lord Provost said that anything under 5 per cent. was an unusual commission. The Council had held strictly to the engagement they made with all the competitors, namely, that the usual commission of 5 per cent. should be given, with travelling and other expenses. Mr. Young had very frankly given up any claim for expenses beyond travelling expenses, and the committee looked upon it as rather an important matter that they should offer every inducement to Mr. Young to visit Glasgow frequently by paying his travelling expenses. The more frequently he came to Glasgow, the more satisfactory would be the buildings.

Mr. Reid pointed out that no provision had been made in the event of the building not costing the estimated sum—although he did not think that probable—for withholding the commission on the amount under the estimate.

The Lord Provost dared say the Council did not expect the buildings to be completed for less than 250,000*l.* He might supplement the information he had already given them by stating that gentlemen for whom Mr. Young had done work had spoken to him in the highest terms of the manner in which he had carried out the operations, and the estimates had not been exceeded. It would be a new experience to them if that were the case in regard to the new buildings.

Bailie Selkirk asked if Mr. Young had anything to do with furnishing the buildings.

The Lord Provost stated that Mr. Young's engagement at present was only in connection with the buildings. If the Council at a future time asked Mr. Young to design furniture or anything of that kind for the buildings, that would be an extension of his engagement.

The minutes were approved.

### CARLISLE CATHEDRAL.

DURING the meeting of the Royal Archaeological Institute at Carlisle there was a visit to the Cathedral. The members met in the Fraternity, where the chair was taken by the Dean. Dr. E. A. Freeman by request described the cathedral. On taking his stand outside the building he said that if a learned man had been suddenly dropped from the clouds into the cathedral garth, and began to think how much he could find out for himself without any man or book to guide him, he would readily find, if he lifted up his eyes to the windows of the upper part of the cathedral tower, that he was in England. He would see Perpendicular windows which could not be found anywhere but in England. He would know at once that he was under the shadow of a great church, and it would not take him long to find out what was the character of the church. It would not take him long to find out it was a Regular church. He would see there were buildings on the right, parallel to the nave, and he would at once feel they were the refectory, and he would be helped to that conclusion if he had been dropped down at Furness and Calder Abbeys before he came to Carlisle. He would see it was not a Cistercian church by the arrangement of the buildings, because in the Cistercian churches the refectory was not parallel to the nave. Then he would doubt, probably, whether it were a Benedictine church. As a matter of fact it was not Benedictine; it was a church of the Austin canons. He would not be able to say positively to what order it belonged; but he would be able to say it was a great English church of some order of monks and not of the Cistercian order. A further question might be whether it was merely a collegiate or conventual church, or the church of a bishop. He did not think there was anything to tell him it was a see—any episcopal palace. Some local antiquary should be able to tell them whether there was ever an episcopal palace in Carlisle, as there commonly was in episcopal cities, and if not, how there never came to be one—whether it was connected with the long vacancy of the see after the first bishop, or whether after bishops had got feudalised and turned into barons they did not care to have a house in the city. As to the time of the building of this church he would say, Here we have a Norman minster, not of the smallest size or the greatest, but a moderate-sized Norman church of which we still have fragments of the nave. He would like to have information to know under what circumstances the nave came to be shortened, but our inquirer could not doubt that there was a much longer nave once than they saw now; and if he were told that it was a church of Austin canons he might



begin to guess even from the outside a little further. He might perhaps guess that the nave had been the parish church, that being the common custom among the Austin canons. That was a point which distinguished this church from other old-standing cathedral churches in England proper, with a few exceptions. The nave was the property of the parish, and was used as the parish church. The inquirer would see himself that here had been a church in the twelfth century, a comparatively small church, and that a vast and magnificent choir of the thirteenth or fourteenth century had displaced the original eastern limb in a very remarkable way. And he would also see that somebody had in later times gone and destroyed the history of the place by sticking in that grand doorway where no grand doorway was or never ought to be, that the history of the past had been wiped out in order to bring in the pretty things of the present. Here was the refectory, there was the walk in the cloister, and there was the dormitory. There was a little door in the transept originally, but no grand door was there, because there was no grand entrance. Why had the church not been left to tell its own story, to tell every man that the dormitory had come up against the church, and leave the signs that there were of it instead of giving us that new masonry? No doubt the new doorway was a fine thing of its kind, but why not leave them those fragments of history which they came from place to place to make out? It was disappointing when they came to a place to find that some ingenious man had done his best to wipe out the history of it, and that there had been a perfectly wanton sacrifice of the building to make the thing pretty. A doorway was wanted, no doubt, but why not stick it somewhere else, and not destroy the historical fragment?

On entering the Cathedral, Dr. Freeman remarked that the nave had not been very early nor, on the other hand, very late Norman work. If it was the work of Bishop Athelwulf, who was Bishop of Carlisle for a long time, he should be well pleased. Turning to the choir, he pointed out the manner in which it had been widened and otherwise enlarged, and remarked that no doubt, when the grand choir was built, it was intended some time to pull down the nave and rebuild it, or it might be that the nave, being the parish church, was not thought about, and the choir was enlarged without regard to the nave at all.

Moving into the choir, Dr. Freeman next pointed out the beauties of the choir. The east window, he said, was the grandest window of the kind in England, and he supposed the world. There was a very big window in a church at Perugia, in Italy, that somewhat reminded him of it, but here they had the finest piece of tracery to be seen anywhere. The next to it was that in the Abbey Church at Selby, in Yorkshire, but that had only seven, whereas this had nine bays, and if his memory did not fail him, the bays at Selby were wider. He pointed out the peculiarities in the construction of the roof, no attempt having been made to vault it. He next drew attention to the series of lancet windows in the aisles, remarking that they were rather more perfect than they ought to be. One or two windows had been put in. It was a very curious thing that if there was a piece of history in a building marking its age there came a wise, modern architect, a man of taste, with his head full of his own ideas, who felt himself as much above history as the King of Rome did above grammar. This modern architect came and said, "I am the only person who am upon a level with the original architect; I am the only person who knows what he would have done." So the work must be swept away. The wise man of taste must wipe out everything and bring it back to what he supposed it would have been in his pet century. This wiping out of history, this destruction of the history of an ancient building was called by the strangely sarcastic name of "restoration." Restoration commonly meant wiping out of history and building up according to the fancy of some architect to whose tender mercies the building may have been handed over. So it was here. These windows were not the original thirteenth century windows—they were windows of the nineteenth century, something else had been stuck in and so wiped out history. He expressed some doubt as to the propriety of fencing off the choir from the nave, remarking that he was tossed to and fro on the subject between the past and the present. In such a case the past was the least harmless, but the case of Carlisle was different, as so little of the nave remained it was necessary to use the choir as the church till somebody should rebuild the nave. If anybody did that he hoped they would build it in nineteenth-century architecture, and not thirteenth.

The Mayor of Carlisle described the upper portion of the east window, and the effigies to be found in the aisles. Mr. Fowler described the capitals of the pillars of the choir, the designs representing the twelve months of the year, as had been made out by his brother, Mr. Fowler, of Wakefield.

Professor Stevens, of Copenhagen, explained the runic inscription in the transept to mean "Dolfin wrote these runes"—that is to say, carved these letters. It was, he said, simply a scribble, and such scribbles were very common in Scandinavia. Sometimes the words were added "To the honour of God." Sometimes they were carved in stone or granite, but sometimes they had been scribbled by the workmen, with his finger or a piece of stick, on a soft brick before it was baked, and then when the brick was baked it was built into the wall. Its date was the tenth century.

## THE STUDY OF ARCHITECTURE IN AMERICA.\*

THE theory and practice of art, united in the person of the master builder of old, produced works which succeeding ages may hope perhaps to emulate, but never to excel, unless, indeed, by a return, not to the conditions of the past—for that is impossible—but to the practice of similar principles and methods, though worked out in a different way. In modern times the office of designer and builder have been divorced, with consequences exceedingly detrimental to each. The former is no longer, as in ancient times, charged with execution of his own designs. His knowledge and experience are therefore likely to lessen as regards the adaptation of materials to special or general purposes, and to become more or less superficial; while the builder, no longer responsible for the artistic quality of the design which he executes, has less and less scope as well as encouragement for the development of knowledge, taste, and skill in the execution of his work. How utterly wrong is all this, and how impossible for either the one or the other to succeed in producing a satisfactory result! Again, while the arts of printing and photography have been instrumental in rendering all who desire it familiar with almost every architectural structure of any note in the civilised world, there has been developed an excessive tendency nowadays to adopt the forms of art without regard to the materials in which they are to be embodied, together with an indiscriminate selection of details of every age and style, without regard to the simple principles involved in their origin, growth, and development.

Speaking professionally, the greatest need of the present day is, first, true taste and accurate knowledge of art in the designer, united with a thorough knowledge of materials and their proper adaptation to truthful construction; second, a public whose educated tastes will detect and condemn every subterfuge, and whose sense of the *ideal* will be satisfied only by the *real*; third, a system of professional instruction for our students or young designers which shall educate teachers as well as taught, and which in effect shall be practical, sufficient, and sure, and which shall embrace not only the highest but the lowest level of the art.

Assuming these three propositions to be granted; with regard to the first, I would suggest that at every regular meeting of the Chapter papers should be read on the exceedingly varied and instructive topics with which the general theme of architecture so greatly abounds. We live in an age of vast development of the material sciences, and the importance of their judicious application and economical adaptation to the endlessly varying wants of constructive design furnishes a never-failing source from which to draw for a subject:—The best methods of construction, past and present, with such suggestions of still greater improvements as may from time to time occur; the question of interest surrounding the subject of *plan*, with its developments, historical and national; the great question of a universal style, parallel to that still greater problem, that of a universal language, to which it bears a large analogy; the development of a truthful treatment of material in construction, before alluded to, and, an equally important matter, the adoption of the most substantial of materials, though attended, it may be, with a sacrifice of mere meretricious ornament which possesses in itself neither use, beauty, nor meaning. Then the question of ornament itself, and its proper treatment in harmony with the material in which it is to be executed. All these, together with many others too numerous here to particularise, might be taken up as specialties by different members of the Chapter, and pursued systematically; and, if followed by discussions and criticisms, would doubtlessly prove eminently beneficial to all concerned.

For the general public, who are apt to imagine that on matters architectural their knowledge is complete, periodical lectures would probably be of great use in arousing interest in the many subjects in which the public have so much at stake, as well as establishing in their minds true principles of taste, and a just and critical judgment as to what constitutes true beauty in architectural design.

Thirdly, and most important of all, the students. It is evident that unless our young men are gradually prepared by intelligent training to take our places in the professional ranks, that either those ranks will be replenished by raw recruits unfitted for the work they have to do, or that foreign talent, of which there is so great an abundance ever pressing at our doors, will step in and supply the public need in designing our dwellings and public buildings, thereby fixing upon us the national peculiarities of style to which its representatives are respectively most attached—generally at variance with the prevailing characteristics of our national taste, and ill-adapted to our climatic requirements. At the best, we shall possess but a feeble and soulless jumble, ever varying with the latest importation of professional taste.

How much better that our young men should be thoroughly furnished, through careful study and assiduous training, by the best and most practical methods within our and their reach; so that they may themselves supply the public demand, and by harmony

\* From an address delivered before the San Francisco Chapter of the American Institute of Architects, by the President, Mr. John Wright.



of effort and unity of thought strive to found and establish on this Pacific coast a school of our own which shall be free from the inherent defects which a variety of foreign styles and methods of building are sure in some degree to possess. To this end I beg to make the following propositions, to be followed by such action in the premises as in your good judgment may be deemed best.

1. To establish a free class for architectural students belonging to the Chapter, the class to be instructed by members of the Institute who shall take up such special branches of study as they may consider themselves best fitted to impart, and who shall give their services free of charge.

2. That the system of study and reading, which may be arranged in harmony with the above, be supplemented by periodical competitions among articulated students.

3. That at the end of three years, a six months' travelling studentship, providing for a tour in the Eastern States and Europe, be established; the privilege of which shall be given to the student obtaining the prize in a competition to be held at that time; the expenses of said student not to exceed say six hundred dollars, and to be paid out of a fund created by the fees of life members. Such fees to be invested as a nucleus of a fund to be kept sacred for the above purpose. In case the interest of said fund be found insufficient for the purpose, the balance to be paid by the Chapter.

The result of some such course would be a systematic study of styles and modes of construction, historical and national, from the best models and under the best available tuition, thus rendering the student familiar with the development of the art from the earliest times. Also the comparative study of real buildings as a final preparation for the chosen work of his life, the success of which would be almost assured by such a conclusion of his arduous study. And lastly, the placing of a sufficient inducement before the student, to lead him to devote himself with earnestness to the work before him.

### CRESSET STONES.

ONE of the papers read before the meeting of the Royal Archæological Institute was by the Rev. J. Lees on "Cresset Stones." The author said that a cresset was a cup of earthenware or metal fastened to the top of a pole, and containing a light, and so forming a portable lantern. When the pole was fixed in the earth and so became a stationary light, the whole apparatus was styled a beacon. Having referred to the place of cresset stones in Heraldry, he traced the derivation of the word "cresset." The application of the word to the cup containing the light brought them to the true derivation. "Cresset" was the middle English word for a cup or vessel containing light fixed on the top of a pole, and came to us through the Old French *crasset*, a cresset, *croiset*, *creuset*, a cruet, pot, crucible (with which last word it seemed most reasonable to ally it); from the Old Dutch *kruyse*, a cup or pot. From the cup, metal pot, or crock the word "cresset" was transferred to a cavity hollowed out in a stone, in which a light was burned. Hence the stones containing these cavities were called "cresset stones." There were three of these in the church and monastery of Durham. They found them described in the "Rites." One was in the church itself, and the two others in the dormitory. These were not earthenware or metal cups standing on or inverted in the stones, but the actual hollows themselves "wrought" in the stone. At a meeting of the Cumberland and Westmorland Archæological Society at Furness Abbey in 1877 he read a paper on the "Probable Use of certain Stones found in the Ruins of Calder and Furness." Two of these were undoubtedly cresset stones; and since the appearance of that paper he had received information regarding such stones from various quarters. Sir Henry Dryden had shown the greatest interest in the matter; and it was at his suggestion, and encouraged by his advice and kindly assistance, that he now ventured to present this subject to the notice of the Institute. He read a list containing particulars of all examples yet brought to his notice. The Swedish ones he knew were called "Holywater stones," or "Vats," but this term seemed misapplied. The list of examples included the cresset stones at Calder Abbey, Furness Abbey, Wool Church, Dorset; Sewanick Church, Cornwall; Carlisle Cathedral; St. Mary's, Monmouth; St. Mary's Abbey, York; Llanthony Abbey; Stockholm Museum, and other places in Sweden. The description of those at Carlisle Cathedral will be interesting. During the restoration of the Fraternity, Carlisle, in 1830, Mr. Creed, the clerk of the works, discovered a cresset stone among other relics stored in the room over the Chapel of St. Catherine in the south transept of the cathedral. Like the fabric itself, this was new red sandstone. What the size or thickness of the stone or number of cups was they had now no means of judging. It seemed, however, to have been rectangular in shape, for a portion of one straight edge remained. It contained the remains of six cups, the circumference of one only being complete, and its base "shaded off" from the natural splitting of the stone. These cups, though not symmetrically placed, seemed all to have been of the same size as the one which was tolerably whole—viz., 4½ inches diameter and 3 inches deep. Soot and fire marks remained in the cups, and there could be no doubt as to the original use of the stone as a cresset stone. Mr. Creed pointed out to him the

interesting fact that the hollows were such a shape as would ensure the entire consumption by the wick of the fat with which they would be filled. Speaking generally of the examples brought before them, he said they all belonged to mediæval times; but was it not probable that their forefathers of the Middle Ages derived their use of hollowed stones for light-holders from still earlier times? Might it not be that the discovery of the use of cresset stones was a step, and a long one, towards the elucidation of the purposes to which those cup-marked stones were put, which had formed so long a puzzle to the prehistoric archæologist.

Sir Henry Dryden also read a paper on "Lamp Niches." He said that in several buildings were small niches or receptacles for lamps, and these were connected with cressets, inasmuch as several of them had in the floor or flat bottom single cups or cressets. Some had chimneys or flues which passed upwards—in some cases passing into the chimneys or fire-places. Others had conical hollows in the heads which he supposed to have caught the soot and prevented its passing out into the room or church as the case was. The date of each must be decided not by the niche itself, but by the structure in which it was. The earliest of which he had illustrations were those in the crypt at Hexham. These were three in number. In the floor of each was a single cresset, and in the roof of each was a conical hollow. They were all rectangular, without any ornament. He described several examples of lamp niches. Some of these niches, such as that, for instance, in the choir practice-room at Westminster, must have been for the preservation of a light and not for the purpose of lighting the room. Why these niches were preferred to the open room for the station of a light was a question. He could only suggest that a cheap smoky light merely for the purpose of preserving a light might burn better in a narrow space with a draught of air across it than in the open room, and be less likely to be blown out. That other niches, which he described, were intended for lamps was shown by the cressets in some of them and by the flues proceeding from them.

Dr. Stevens said the stones were largely known in Sweden as elf-stones, and the rubbing of them with grease was an offering to the household gods or elves.

### MEDMENHAM AND BISHAM.

THE members of the Berks Archæological and Architectural Society lately visited Medmenham and Bisham Abbeys, on the Thames. Mr. Rutland read papers on both buildings.

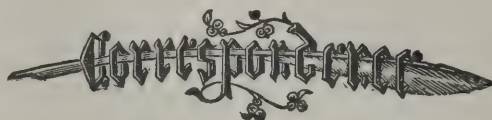
The Manor of Medmenham, soon after the Conquest, was given to Hugh de Bolebec, one of the Norman barons who came over with William the Conqueror. His elder son, Hugh, founded the Abbey of Wooburne, in Bedfordshire, in May 1145, and gave the Manor of Medmenham to found a cell to it. A charter of King John in 1201 confirmed the gift, and in 1204 some of the Cistercian monks of Wooburne came and settled here. In the beginning of the sixteenth century it was annexed to the Abbey of Bristleham or Bisham, in the county of Berks. On the suppression of the monasteries by Henry VIII. the commissioners returned that this monastery was "of the Order of St. Bernard (who became a Cistercian monk in 1114); the clear value, 20*l.* 6*s.* 2*d.*; monks there two, and both desyren to go to houses of religion; servants none; bells, &c. &c., worth 2*l.* 6*s.* 8*d.*; the house wholly in ruin; the value of the moveable goods, 1*l.* 3*s.* 8*d.*; woods none; debts none." The Abbot of Medmenham was *ex officio* epistolar of the Order of the Garter, and his duty was to read the Epistle in the morning service on St. George's Day at Windsor, when the sovereign celebrated the annual feast. The Abbey Church seemed to have been a stately building, well wrought with ashlar work; the windows high and spacious. It probably consisted of a body and two side-aisles, and chancel, and had a tower at the west end. Langley, in 1797, remarked that "the chapel no longer remains, and only one pillar is standing of the north aisle. The figure of the Virgin, seated on a throne and holding the infant Saviour in her arms, carved in marble, still remains, and is placed in a niche of the tower." After the suppression of Bisham Abbey, the abbey and lands of Medmenham were granted to Robert Moore, and the family of Duffield succeeded soon afterwards, and possessed the estate till 1779, when the site of the Abbey was purchased by John Martin, Esq., Chief Justice of Chester, and sold by his widow, together with Danesfield, in 1786 to Robert Scott, Esq., who bequeathed it to his widow for life, and at her death to her nephew Charles Scott Murray, whose son is the present possessor. Mr. Rutland then gave some account of the celebrated association of men founded in the last century under the title of "Monks of St. Francis," and also called the "Hell-fire Club," which met at Medmenham, and was broken up in 1764. Part of the "cradle" in which the notorious John Wilkes (one of the members) slept, is still preserved at the Abbey, and the motto of the club, "Fay ce que voudras," is still over the door. The church (dedicated to St. Peter) is an ancient fabric, composed of a nave and chancel under one roof, a west tower, with three bells, and a south porch, the inner door of which is Norman. On the north wall are traces of a large arch. The tower arch is lofty, but there is no



arch or screen between the nave and chancel. In the south wall is a piscina, under a plain pointed arch, and in the north wall is a large ambrey with ogre head. The pulpit, of oak, is hexagonal, and carved. The church contains some old painted glass.

The manor of Bisham, Bristleham, or Bustleham, was given to the Knights Templars by Robert de Ferrarius (to whose grandfather it had been granted by William the Conqueror) in the reign of King Stephen, and a preceptory built on it. On the downfall of the Templars in 1312 it was granted to the Knights Hospitalers; and again in 1335 by Edward III. to William Montacute, Earl of Salisbury, who in 1338 built here a priory for Benedictine Monks of the order of St. Augustine, and endowed it with 285*l.* 1*s.* per annum. It was, according to Ashmole, "basely and contrary to the most solemn oaths," surrendered in 1536 to Henry VIII., who refounded it in the following year and endowed it with the lands of Ankerwyck, Chertsey, Little Marlow, Medmenham, and West Wycombe, to the amount of 661*l.* 14*s.* 9*d.* a year, for the maintenance of an Abbot and thirteen Benedictine Monks, and intended to have granted the privilege of the mitre to it; but in three years suppressed it for ever. The place was subsequently granted by the King to his repudiated wife, Ann of Cleves; but owing to his death before the seal was affixed to the deed, and to the troubles during the reign of Edward VI., it was not till the time of Queen Mary that it absolutely became her property. By permission of the Queen she exchanged Bisham with Sir Philip Hoby for his house in Kent, and the property remained in the Hoby family till 1768. The Princess Elizabeth resided two or three years at the Abbey; and in one of the apartments, still called her Council Chamber, a bow window was thrown out and a dais erected for her use. The windows in the Council Chamber contain some ancient shields of painted glass, two of which were in the church at Bisham. Among them are those of Montague, who married Catherine, daughter of Lord Grandison, created Earl of Salisbury, and who died in 1343; Sir Richard Pole, and the Lady Plantagenet, his wife; the Countess of Salisbury, beheaded by Henry VIII.; and Cecil, Earl of Exeter, who married one of the daughters of Neville, Lord Latimer. These are the only pieces of stained glass which seemed to have escaped the fury of the Puritans. The windows of Bisham must have been very rich in painted glass. The Hall was formerly the site of a preceptory of Knights Templars, and afterwards the Church of a Priory of Benedictine monks. The bones of the founder of the Abbey, John Montacute, Earl of Salisbury, are said to have been removed hither by Maude, his widow, from the Abbey of Cirencester. When the ceiling of the hall was removed it disclosed an early English roof of oak, which has been thoroughly restored. At the east end is a fine Early English window, now built up and painted in imitation of coloured glass. When the plaster which for a long time had blocked the window was removed, the stone mullions were found in tolerable order; and on the upper part of the window was discovered a fresco of St. Peter with the Holy key, and the colours were in such a state of preservation that it was easily restored. In a recess on the north side of the hall is a fresco by Roddam Spencer Stanhope, representing the death of Thomas Montague, fourth Earl of Salisbury, and his esquire Sir Thomas Gargrave, at the siege of Orleans in 1428. His tomb, and that of the Earl of Warwick, the "King-maker," who was also buried here, was destroyed by Sir Thomas Hoby when he erected the oak screen at the entrance. Here also rest the remains of William, Earl of Salisbury, his son John, Earl of Salisbury, Richard Neville, Earl of Salisbury, and his two sons, Richard, Earl of Warwick, and John, Marquis of Montague, and Edward, Earl of Warwick, the last of the male line of the Plantagenets. Most of these illustrious characters had splendid monuments in the conventual church, but they were all destroyed after the dissolution of the Abbey. On the south side of the hall is a magnificent marble mantelpiece, with richly-carved oak panelling, which was originally given by James I. to the then Earl of Plymouth, and was brought here from the earl's country seat in Worcester, in 1843. The panelled room adjoining the hall is a fine specimen of domestic architecture, and contains a large number of notable portraits, including Van Tromp, by Sir Peter Lely; General Monk, by Peter Bursler, and another by the same artist of John Claypole, who married Cromwell's second daughter; Prince Henry, eldest son of James I., by Zuchera; Henrietta Maria, by Vandyke; Princess Caroline, mother of George III.; and two prints of George III. and Queen Charlotte, which were presented by the latter to the eldest daughter of the late Mr. G. Vansittart. There is also a singular painting of Lady Hoby (whose husband died in France in 1566), who is supposed to haunt one of the bedrooms, preceded by a self-supported basin in which she is perpetually trying to wash her hands. It is remarkable that the apparition is always in the negative, the white parts being black and the black white. The legend is that she beat her son William to death because he could not write without making blots; and it is very singular that about forty years ago in altering a window in the dining-room a number of children's copy-books of the time of Queen Elizabeth were found pushed between the joists of the floor, one of the copy-books being smothered in blots. Behind the tapestry in one of the bedrooms a secret room was discovered. The principal en-

trance to the mansion is through an Early English doorway of stone, deeply recessed, with pointed arch, and supported by slender stone shafts, and a groined roof within. This, and the hall, are the only remaining portions of the work of the time of King Stephen. The rest of the house is in the Tudor style, and was the work of the Hobys. In the grounds can be traced, in very dry seasons, the foundations of much of the old Abbey; and the original moat round the grounds still remains. The estate was purchased in 1781 by Mr. George Vansittart, who represented Berkshire in Parliament from 1784 to 1812.



#### Mr. Burges' Advice.

SIR,—The letter you published last week from a "Student of Nature" hardly seems calculated to advance the interests of the profession.

In this age when money-getting is regarded as the chief end in life, is it wise to criticise so severely any attempt to hold up art as an object to be pursued for its own sake?

Even in an architectural student of the age of 26 or 28 may not some germ of artistic feeling be still latent, waiting only for a favourable opportunity to develop? Is there no truth in the "Mute inglorious Milton" theory, or in the homely expression, "You never know what you can do till you try?"

Though probably anyone possessing *great* artistic ability will feel a strong desire to exercise it, yet may not uncongenial circumstances retard, and in some cases quite smother, the feebler impulses of ordinary men? And it is of these the bulk of the profession must be composed.

We are all formed from the same clay, and possess the artistic faculty in a greater or less degree. Compared with that of Pheidias or Titian the sense of form or colour possessed by a "Student of Nature," he doubtless will admit, must be faint in the extreme. Should it not be our endeavour to develop the little we have to its utmost perfection? A "Student of Nature" appears to think that Mr. Burges' advice may result in harm instead of benefit.

Let us take an extreme case. The lowest form of architecture, it will be readily admitted, is to be seen in the work of speculating builders: were these compelled to go through a course of figure drawing or sketching from nature, would their work be worse than it is?

Instead of throwing cold water on any endeavour, even though a tardy one, after higher things, let us say to our fellow-students, aim high, and then if your efforts end only in failure, that failure will be more glorious than the successes of other men.

Your obedient servant,

H. G. N.

August 9, 1882.

#### Surveyors' Fees in Criminal Cases.

SIR,—As an architect and surveyor practising in a Midland town, I desire to ask a few questions in your paper as to the practice of assize courts with regard to the scale of fees, plans, attendance, travelling expenses, and the like allowed to our profession. I trust I may therein receive such an answer that may decide the future action to be taken in what I consider an injustice. In the ordinary course of professional business, I was sent for by a firm of solicitors prosecuting for the county in a case of assault and manslaughter, to prepare a plan of the premises where an alleged assault and manslaughter had taken place. These premises are in the country, between five and six miles from my office, and to reach them it was necessary to drive there and back, which I did, taking measurements, plotting, attending solicitors thereon, and finishing plan for assizes. When requested, I gave the solicitors' clerk my account, 4*l.* 4*s.*, to present to the taxing-master of the court, which I think a moderate charge for two days' work, and horse, &c., hire half a day. In addition, I attended upon subpoena for two days at the assizes, and travelled twenty-four miles each day, for which I expected the greatly reduced fee of 1*l.* 1*s.* per day and second-class railway fare (6*s.*), making a total of 6*l.* 12*s.*

My fellow-architects I am sure imagine my disgust when I found that the taxing-master (without my being present) allowed 10*s.* 6*d.* only for the preparation of plan and journey to obtain measurements, 1*l.* 1*s.* for two days' attendance at the court, and 4*s.* railway fare—total 1*l.* 15*s.* 6*d.*, which I received and signed for under protest. The questions now arise as to how I am to obtain redress, and what is the best way to proceed. What remedy have I against the court to obtain the balance? I am told there is no appeal, and that the taxing-master can award what he pleases. Is this so? It certainly appears hardly justice that the prosecuting solicitor should be called on to pay the balance out of his own pocket.

I have no doubt some of our professional brethren have been similarly situate. Can they give me the benefit of their experience



in such matters? What are the authorised assize court fees for an architect and surveyor's attendance, &c.? Any information they can give will be esteemed a favour, and I trust be appreciated by your readers, as by  
Yours faithfully,  
A COUNTRY ARCHITECT.

### REVIEWS.

WEALE'S RUDIMENTARY SERIES. Vols. CCXXVI. to CCXXX. Crosby Lockwood & Co.

The latest additions to Weale's Series uphold the character of that useful collection of handbooks. The subject of No. 226 is "The Joints Made and Used by Builders," and the volume has been compiled by Mr. Wyvill J. Christy. The author has exercised much industry in arranging the joints of the different trades, and as construction is mainly the putting together of pieces, the little book, if it is not an epitome of the builder's art, is not far from being so. There is no volume in the series which is more useful.

A new edition of Mr. Campin's "Treatise on Mathematics as Applied to the Constructive Arts" is the next volume. As the author is a civil engineer he is able to suggest the relations between abstract science and practice throughout his book, and the architectural or engineering student consequently finds his progress facilitated by the constant reference to familiar things. Any book bearing Mr. Tarn's name is sure to be well received among architects. His "Construction of Roofs of Wood and Iron," which is 228 in the series, is described as an introduction to larger works. It is clearly written, but a great many of the examples refer to large structures. In a book for beginners it would be more advantageous to have several types of roofs which are required in every-day practice. It would have been easy to tabulate the information and to supply simple diagrams. Mr. Tarn would also render a service to students if he contrasted the theoretical dimensions of a few well-known roofs with those which have been employed in construction. The subject of No. 229 is "Elementary Decoration," by Mr. J. W. Facey, and the volume contains a surprising amount of useful hints and diagrams. In No. 230 Mr. Collings endeavours to explain the mysteries of handrailing according to a system devised by himself.

SIX ETCHINGS OF WELL-KNOWN VIEWS IN KENSINGTON GARDENS AND HYDE PARK. Etched on Copper from Nature by TRISTAM J. ELLIS. With a Descriptive Account by W. J. LOFTIE, B.A., F.S.A. Field & Tuer.

Hyde Park is the only park in England which may be called national: all others are local. But the natural beauties of the place have not been represented as truly as they deserve. The Park and Gardens afford so many subjects for the illustrations of periodical literature, it is supposed they are not adapted for a higher and more permanent form of art. That this is an error is seen from the fine etchings of Mr. Ellis. In them justice has been done to the noble trees, which cannot be matched in any Continental capital. The points of view have been in all cases well selected, and the etchings are picturesque without loss of accuracy. The greatest difficulty in representing Hyde Park arises from the necessity of introducing a number of figures, for the place is popularly associated with a crowd. A landscape artist cannot do justice to figures, and when a figure draughtsman is employed the co-operation is rarely successful. The men, women, and horses which appear in Mr. Ellis's etching of Rotten Row will not bear examination. They are, we suppose, to be accepted as conventionalisms, which could no more be omitted than the title of the plate. The series forms an interesting record of the Park and Gardens.

### ART WORKMANSHIP.

**Stained Glass.**—The east window of the chancel of the church of St. Stephen the Martyr, Avenue Road, St. John's Wood, has been filled with stained glass. The artist, Mr. W. G. Bailey, has treated the five lights with white Perpendicular glass, which well relieves the subjects. The Adoration of the Magi and the Shepherds fill the centre three lights, and the two remaining outer lights contain each two subjects—namely, the Annunciation and the Child Jesus in the Temple, and the Agony in the Garden and the three Marys at the Holy Sepulchre. In the tracery above are St. Stephen the Martyr, patron of the church; St. John the Baptist, patron of the district; and St. Paul the Apostle, patron of the See of London. At the foot of the window is the legend, "To the glory of God and in memory of Alfred Swaine Taylor, M.D. and F.R.S., and Caroline his wife, this window is erected by their daughter and son-in-law, Edith and Frederic Methold, A.D. 1882." The scheme of colour has been carefully studied, and is a very successful attempt to reconcile low sweet tones of quiet harmonious colours with the brightness and translucency required for a window. The effect during some parts of the day will be materially improved whenever the west window of the nave is also filled with stained glass, as the full glare of light through it now somewhat detracts from the delicate beauty of the new work.

### LEGAL.

**Supreme Court of Judicature.—Court of Appeal.—August 7.**  
(Before the MASTER OF THE ROLLS and Lords Justices BRETT and COTTON.)

ROBINSON v. THE LOCAL BOARD FOR THE DISTRICT OF BARTON, ECCLES, WINTON, AND MONTON.

"NEW STREETS."

This appeal from a decision of Mr. Justice Fry raised a question of some importance with reference to the powers of local boards with regard to "new streets"—viz., what is the meaning of the term "new street" in the Local Government Act of 1858, and the Public Health Act of 1875, and the bylaws made by the defendants in exercise of their statutory powers. Section 34 of the Act of 1858 provides that "every local board may make bylaws with respect to the following matters (*inter alia*):—(1) With respect to the level, width, and construction of new streets, and provisions for the sewerage through." Section 157 of the Act of 1875 gives the same powers "to every urban authority." Section 2 of the Public Health Act of 1848 (with which by section 4 of the Act of 1858 the latter Act is to be construed) provides that "the word 'street' shall apply to and include any highway (not being a turnpike road), and any road, public bridge (not being a county bridge), lane, footway, square, court, alley, passage, whether a thoroughfare or not, and the parts of any such highway, road, bridge, lane, footway, square, court, alley, or passage within the limits of any district." Section 4 of the Act of 1875 contains a similar definition of the word "street." There is at Patricroft, in the parish of Eccles, near Manchester, within the district of the defendant Board, a public highway called New Lane, which has existed for many years. New Lane is 885 yards in length, running in a direction nearly north and south, from the Liverpool Road to the Worsley Road. The plaintiff has agreed to take a lease for a long term of a plot of land on the west side of New Lane for building purposes. Eccles is about four miles from Manchester. Fifty years ago it was a small country village, but now it is a kind of suburb to Manchester. New Lane is not a turnpike road. It was formerly a country lane, with no well-defined footways, and it was usually repaired by having cinders thrown upon it. The Board have repaired it since the date of their formation, about the year 1850. Until the last ten years it was a cinder roadway, with no well-defined footways, and with grass growing at the sides. It has now a cindered footpath along the whole of both sides, except for a very short portion on the westerly side. The footpath on the easterly side was made by the Board in 1880; that on the westerly side in 1881. New Lane is repaired by the Board as a highway repairable by the inhabitants at large. In 1876 and 1877 the Board made a drive along the roadway, and in 1880 they channelled and paved it along the whole length and width. The population of the district has increased in the last ten years from 15,126 to 21,785, and the number of houses from 3,205 to 4,057, and one hundred new houses are now being built. On the west side of New Lane are twenty houses, some detached, others standing two, three, or four together. Of the land on the west side not actually built on, several plots, besides the plaintiff's, have been let for building purposes. On the east side there are sixty-seven houses, including a row of twelve cottages in course of erection, another row of sixteen cottages, a row of nine houses, another row of eight houses, another row of nine cottages, and another row of four cottages. Other land on the east side has been let for building purposes. The Board in 1871 made some bylaws as to the "level, width, and construction of new streets," and these bylaws were allowed by the Local Government Board on January 1, 1872. The first of these bylaws provided that "every new street shall be laid out and formed of such width and at such level as the Board shall in each case determine." Bylaw 36 required that every person should, before beginning to make or lay out any new street, give a month's notice in writing of his intention to the Board, and should leave with their surveyor certain plans and sections. Bylaw 37 made similar requirements with regard to every person who should intend to erect any new building. Bylaw 42 provided that the Board should approve or disapprove proposed new works or buildings within the times specified, and that the owner or person intending to erect any new street or building should give the notices thereby required, and if any owner or person should construct any works contrary to the provisions therein contained, the Board, after calling on such owner or person to show cause, might, if they should think fit, have such works removed, altered, or pulled down, as the case might require. The plaintiff gave notice to the Board of his intention to erect new buildings on his land, and left plans and sections at their office showing the intended building line of his proposed new buildings. The Board disapproved the proposed new buildings, on the ground that the houses would contravene the building line, and would be built within the line of the existing buildings on that side of the street, and they required the proposed building line to be thrown further back about ten yards from the roadway of New Lane. The plaintiff commenced to build according to his plans, and the Board called on him to show cause why his works should not be removed. The plaintiff disputed the right of the Board to disapprove of his plans on the ground that



his intended building line was too near the roadway, or to pull down his new buildings if erected in accordance with his plans. This action was brought to restrain the Board from doing what they proposed to do, and a special case was then stated for the opinion of the Court, whether New Lane was a "new street" within the meaning of the Acts, and whether the Board were entitled to disapprove of the plaintiff's proposed new buildings on the ground stated, or to pull down his new buildings.

Mr. Justice Fry held that the term "new street" in the Acts applied only to a street constructed for the first time out of grass land or other vacant land, and not to an old country road in the neighbourhood of a town, which, by the building of houses on each side of it, had become, or was gradually becoming, a street, and consequently that New Lane was not a "new street," and that the Board had no power to disapprove or to pull down the plaintiff's new buildings. The Board appealed.

The Master of the Rolls could not say that the Act was not fairly open to more than one construction. The case was a very difficult one, and was fairly open to a difference of opinion. But regard must be had to what must be presumed to have been the intention of the Legislature. The intention must have been to give to a local authority the power of regulating the laying out of new streets—a power to be exercised for the public benefit. What was the meaning of the term "new street?" His lordship should say it meant a street where there was no street before, though it might include more. This might take place in one of two ways. A street might be made out of a grass field, and, in his lordship's view, it would make no difference whether or not an old country lane or road was thrown into it. In such a case as this a person who designed to build houses along the street was to build them in a particular way, and subject to the bylaws of the Board. But then there was another case, where the street was not laid out in a formal way, but, so to speak, grew of itself. When did it become a street? At some time or other it must do so. But when? You could not tell unless you knew the locality. It was a question of fact in each case. Section 157 of the Act of 1875 plainly empowered the Board to make bylaws before the street was made, and the moment the street became a "new street" it was subject to the bylaws. Upon the facts of the present case his lordship thought there could be no doubt that New Lane was a "new street." It was a very young street indeed. On the east side, opposite to the plaintiff's land, there was a continuous line of houses, extending beyond his land on either side. The Board had in substance called on the plaintiff to build the street of a certain width. He was laying out a "new street," building a continuous line of houses. His lordship was satisfied that the defendants were acting within their powers, and the appeal must succeed.

Lord Justice Brett and Lord Justice Cotton delivered judgment to the same effect.

#### Queen's Bench Division.—August 9.

(Before Lord COLERIDGE.)

BRADWELL v. EARL OF KILMOREY.

A BUILDER'S ACCOUNT.

An application in this case was made by Mr. Grain on behalf of the plaintiff for judgment for 1,982*l.*, with costs, upon the report of the official referee. The action was one brought by a builder to recover a sum of 3,000*l.*, as certified by the architect employed by the defendant to be due to the plaintiff for work done at the St. James's Theatre. The defence as to this amount had been that it was exorbitant, and the official referee had indeed reduced it by about one-third. As to a counterclaim by the defendant for a large sum as representing the losses incurred by him through the plaintiff's delay in completing the alterations to the theatre—firstly, within a reasonable time before February 1879; and secondly, within a time named subsequently in a written agreement between the parties, viz. April 10, 1879—the official referee found that the defendant was entitled to only nominal damages, and awarded him 40*s.*

Mr. Maloney, for defendant, sought to show that the award of such 40*s.* had been made by the official referee on a wrong principle. The theatre, which is now let to Messrs. Hare & Kendal for nine years, had, as he contended, had a letting value from April to September 1879, and this the defendant had lost from the breach of their contract to complete the repairs by April 10 by the defendant. The defendant was therefore entitled to more than the nominal damages awarded him by Mr. Dowdeswell, Q.C., the official referee. For the short season of May, June, and July 1879 the defendant might have obtained quite 1,000*l.* as rent.

Lord Coleridge said that it had been only in deference to the urgency with which he had been pressed by the learned counsel for the defendant to send the case back to the official referee, that he might state his reasons for his award, that he (the learned Judge) had consented to do so. The official referee had gone fully and carefully into those reasons, and it was quite clear that his award was a perfectly proper one. The plaintiff would have judgment on his claim for 1,982*l.* and costs, and the defendant on the counterclaim judgment for 40*s.*, but without costs, except such as had been improperly thrown away by the defendant in resisting

the application to send the counterclaim to the official referee. There would be a special order that the taxation of the costs should be proceeded with at once, and there would be no stay of execution granted.

#### CHURCH BUILDING AND RESTORATION.

**Beedon.**—The church of St. Nicholas has been re-opened after restoration, which has been carried out under the direction of Mr. E. Dolby, architect. The alterations have as far as possible been made in a style to accord with that of the original architecture, which is Transition Norman. The nave and chancel having been stripped of their tiles, the roofs have been soundly repaired with oak and the tiles re-laid. The west wall, which was considerably out of the perpendicular, has been straightened without being pulled down, and an unsightly brick porch has been replaced by one of massive oak. The walls generally have been repaired where necessary. A new bell cot has been erected, supported by massive timber framing rising from the floor of the church. The nave has been seated with oak benches on a floor of wooden blocks, and the aisle has been laid with red bricks in patterns. In the chancel what is believed to be the restoration of an old feature has been supplied—viz., a ceiling of oak with carved oak bosses. The floor has been laid with glazed tiles specially designed by the architect, and manufactured by Mr. Godwin, of Lugwardine. New oak chancel seats have been put in; and the three east window lights have been filled with stained glass by Messrs. Heaton, Butler & Bayne.

**Cullercoats.**—The Duke of Northumberland laid the foundation-stone of St. George's Church on the 4th inst. His Grace has given the site, and undertakes the entire cost of the building, which, it is estimated, will amount to about 18,000*l.*; he has also given the site for a vicarage house, and, jointly with the Ecclesiastical Commissioners, has provided an endowment to the amount of 300*l.* a year. In style the church will be of thirteenth-century character. It will consist of a nave enclosing an area of 84 feet by 56 feet, with western narthex treated as a baptistery, and entered by porches on the north and south sides. The chancel, with apsidal eastern termination, will be 50 feet long and 21 feet wide. A tower, in which it is proposed to place the organ, will be south of the western bay of the chancel; and the corresponding position on the north side of the chancel will be occupied by a transept about 20 feet square, with a large vestry west of it. The total length of the church from east to west will be 158 feet, and the greatest breadth from north to south about 90 feet. The church is to be built entirely and faced inside and outside with local stone. The nave and aisles will be divided into five equal bays, and separated by simple arcades with circular columns and plain moulded arches. There will also be a narrow triforium, not pierced, and a lofty clerestory, with windows of two lights. The external surface of the clerestory walls will be unbroken, and the bays will be marked by buttresses on the aisle walls, with a single lancet window in the centre of each bay. The narthex will be groined over about 12 feet above the nave floor, and the nave, clerestory, triforium, &c., continued over it, thus giving the effect of an internal porch, over which will be seen the west windows of three lights each, and 22 feet high, and almost the whole width of gable. This gable will have angular turrets, corbel course, and circular window over to light the roof. The nave and aisles (as well as the rest of the church), will be groined with plain quadripartite groining, with a timber roof over of steep pitch. The height inside will be 44 feet, and to the point of ridge 20 feet higher. The chancel, including the apse, will be divided internally and externally into nine bays by upright shafts; externally the walls will be plain up to the level of the sills of the windows 25 feet above the floor. These windows will be of two lights, with blank arches on either side, thus giving the effect of a continuous arcade. A tall wall arcade will surround the chancel at the floor level. The blank triforium of nave will be continued round, and the clerestory windows will be widely splayed, so as to completely fill each bay. Lofty arches will open into the tower on the south, and into the transept on the north. The transept gable will be filled by a large four-light window, and a three-light window will light the lowest stage of the tower. The tower will rise to a height of 90 feet, and will be covered by a broach spire of about the same elevation, with one tier of spire lights only. The belfry windows will be long louvered windows of two lights, with transoms. The passage ways are to be paved with tiles, the chancel floor being a little more enriched than the rest. Under the seats the floors will be wood. The church will be seated with open benches in oak, and will have all the usual furniture and fittings of appropriate design. The church is being built from plans prepared by and under the superintendence of Mr. J. Pearson, R.A. The whole of the works are being executed by Mr. Walter Scott, Newcastle.

**Manchester Diocese.**—A sitting of the Manchester Consistory Court was held on the 4th inst., when faculties were decreed for rebuilding Christ Church, Walmersley, and for building a choir vestry and opening a window in the bell tower in connection with Holy Trinity Church, Habergham Eaves. An application was also made for a faculty to make certain alterations and improvements



in St. Mark's Church, Worsley, including a low old oak screen, altering staircase to pulpit, new chancel floor—marble, mosaic, and tiles—new marble steps and altar pace, removing the Earl of Ellesmere's stalls into the private chapel, and putting new choir stalls of oak in chancel, new chancel aisle for vestries, and removing organ to same, and making good the stalls in the church when organ and choir are removed. The consent of the Earl of Ellesmere to the changes affecting his rights having been obtained, a faculty was decreed as prayed. The vicar of Christ Church, Ainsworth, made a first application for permission to erect a small vestry on the south side of the chancel, and for removing the organ from the west gallery to the floor of the north transept, for removing the pulpit from the south to the north side of the chancel, and bringing over the reading desk to the south side. An application was also made for a faculty in reference to St. James's Church, Ashworth, to take up the old pews and replace them by sittings of a more convenient and modern kind, put in new heating apparatus, construct a new reading desk and make the present one into a pulpit, the present pulpit having fallen in from decay. A faculty was decreed in this case also, subject to a plan being brought in showing the final arrangements for the choir seats and pulpit.

### NEW BUILDINGS.

**Cardiff.**—The old public-houses and the book-shop by the Town-hall have been removed, and the site is occupied by a new building erected for the London and Provincial Banking Company, which takes the leading position among similar structures in the Principality. This building, which is partly in the Italian style—three storeys high with basement—is built with local brick, faced with Bath stone, with French rusticated ashlar courses, in three stages, each stage being marked by richly-moulded entablatures, with carved enrichments, and flanked with pilasters on front and side elevations, between which are windows, deeply-moulded dressings, balconettes, and balustrades. The building is covered with a high-pitched roof. The basement is built of massive masonry in blocks of extra thickness, closely set, lined with vitreified white brick, and arched over in brick and cement, with massive iron fireproof doors where necessary. The basement and the several storeys of the building are arched in brick and cement, on wrought-iron girders, which form the several floors, and cased over with pitch-pine flooring, rendering the whole building fireproof. The principal staircase, which is constructed of moulded Forest of Dean stone and ornamental cast-iron balusters, is lighted by a lantern light in the roof, which assists in the ventilation of the building. The building has been erected by Mr. Lock, builder, from the designs of Mr. W. D. Bleesley, architect, Cardiff. In the same street a building for the South Wales Dairy Company was opened last week. It was also designed by Mr. Bleesley and is in the Renaissance style, three storeys high, with basement built of rubble masonry, and faced with Bath stone. Each storey is marked by a richly-moulded entablature, carved and supported on cluster columns and pilasters, with rich foliage, caps, and bases, and divides the entire front into three bays. A building corresponding in style is also in course of erection from Mr. Bleesley's designs.

**Manchester.**—The works in connection with the new passenger station which the London and North-Western Railway Company are erecting at Hunt's Bank are making rapid progress. Built, as the station will be, entirely upon arches, and abutting upon the river Irwell, engineering difficulties of no inconsiderable character have presented themselves, but these have been successfully surmounted. The station itself will cover an area of about five and a half acres. Some of the platforms are now in course of construction, and the foundations for the iron columns supporting the roof are being prepared. The station itself will be covered by three iron spans, filled in with glass, and supported upon iron columns. There will be three main platforms, each of the length of 230 yards, and of varying width, with the necessary roadways for cabs, &c. The waiting-rooms, booking-offices, refreshment-rooms, and various other offices will be at the principal entrance to the station, opposite Victoria Street, and will extend round the corner to the east end of the structure, covering a length of 360 feet. The work is being carried out from the plans of Mr. Francis Stevenson, the company's engineer-in-chief, Mr. W. B. Worthington being the resident engineer. Messrs. R. Neill & Son are the contractors.

**Leeds Coliseum.**—The foundation-stone of this building was laid on Saturday by Sir Andrew Fairbairn, M.P. The new building is being constructed by the Coliseum Buildings and Offices Company (Limited), and will be suitable for the holding of public meetings, entertainments, amateur theatricals, and religious gatherings, or for a circus. It will be constructed in the form of an amphitheatre, and will hold 5,000 persons. Sitting accommodation will be provided for 3,500 people. The façade will be built of stone, and the roof will be in one span formed by a laminated rib. There will be two galleries, the approaches to which will be by fireproof staircases. Stables will also be erected in proximity to the Coliseum. The building is estimated to cost 12,000*l.* The

contractors are Messrs. Franks & Evans, excavators, bricklayers, masons, and plasterers; Messrs. Craven & Umpleby, carpenters and joiners; Mr. Geo. Thompson, plumber; Messrs. J. & W. Atkinson, slaters; Messrs. Nelson & Sons, ironmongers; Messrs. Walsh & Sons, painters. The building will be erected from plans prepared by Mr. Bakewell, architect.

### SCHOOL BUILDINGS.

**Glasgow.**—The new schools in Albert Road, Pollokshields, were opened on Monday. Advantage has been taken of a difference of level in the streets to get a covered playground under one-half of the building, and this has been of great service in increasing the size of playgrounds, and also obtaining greater than usual proportion of shelter. The building is two storeys high, and of square plan, measuring 82 feet by 75 feet. The separate stairs for boys and girls are combined on a novel plan, which gives spacious appearance and completely separate access to all the departments, the whole being at the same time under the view of the master from any point. The school will accommodate 850 scholars at the increased space now required by the Education Department, and the cost will be under the 10*l.* per child limit of the Government. The architects are Messrs. H. & D. Barclay.

### ENGINEERING WORKS.

**South Staffordshire Drainage.**—The iron and coal masters of the South Staffordshire district are earnestly discussing the prospects of the South Staffordshire Mines Drainage Commission. Its ability to do the work for which it was appointed is being questioned, and a failure would result in the drowning out of the district, and enormous losses in the coal and iron trades. The matter was brought up at the monthly meeting of the Commission. Mr. Walter Bassano, of the Old Hill district, declared that the Commission had frittered away between 130,000*l.* and 140,000*l.*, and had done nothing like the work that might have been done. The system upon which the drainage had been conducted was simply pumping the same water over and over again out of mines to which it was constantly returning. The Old Hill district had been drained at last, but not until a debt of 30,000*l.* had been incurred. One-half of the Tipton district was still under water. The Commission had just obtained security for further capital of 25,000*l.* or 30,000*l.* They could not afford, for their own credit's sake, to ask for more money. They must look upon this sum as all they now had left. Unless some radical change were made in the executive, this money would be frittered away like the rest. The pumps would have to be stopped, the mines would be flooded, the iron and coal industry paralysed, and the Commission—containing presumably the pick of South Staffordshire for men of standing and ability—be eternally disgraced. The Commission never had worked harmoniously as a body. Party spirit and jealousies had characterised its dealings. The only remedy was to vest the executive in one able man, if possible independent of the district—whether paid or unpaid—who should be recognised as the supreme head.

### GENERAL.

**Mr. J. E. Boehm, R.A.**, has been awarded the gold medal for sculpture at the Vienna International Art Exhibition.

**Mr. Millais, R.A.**, has taken the Murthly Moor, in the Aberfeldy district, for the season.

**The Design** of Mr. E. H. Bruton, A.R.I.B.A., of Cardiff, has been adopted for the new Institute of the Blind, Cardiff. The second premium was awarded to Mr. E. M. B. Vaughan.

**An Exhibition** of Art and Industry was opened at Crieff on Monday by Lord Aveland.

**The New Buildings** to be erected in Winnipeg, Canada, are expected to cost five millions of dollars. The Grand Canadian Pacific Hotel is being erected at a cost of 500,000 dollars.

**A Statue of Mr. Gladstone**, by Mr. A. B. Joy, was unveiled at Bow on Wednesday by Lord Carlingford. It stands in the centre of the roadway near the parish church, and has been presented by Mr. T. H. Bryant.

**A Conservative Club** has been opened in Blackburn Street, Bolton. It was erected from designs by Mr. R. Knill Freeman.

**The Members** of the London and Middlesex Archæological Society will visit Silchester on Thursday, when Mr. Price will conduct them over the ground. Mr. J. Parker and the Rev. T. Langshaw have promised assistance.

**Mr. Frank Matcham's** plans for the reconstruction of the Philharmonic Theatre at Islington have been passed without alteration by the Metropolitan Board of Works and the Lord Chamberlain. The work is to be commenced forthwith.

**Mr. R. H. Hodgson**, of Workington, has obtained the contract for the erection of the new steel works for Messrs. Cammell & Co. at Workington. The contract amount is about 50,000*l.*, and it is expected that operations will be commenced next week.



# The Architect.

## WHAT WE WILL DO WITH THE DUKE.



SIR HENRY HOLLAND, M.P., must be not only sympathised with, but cordially excused, if he felt himself unequal to the task of answering all in a moment Mr. GLADSTONE'S startling question, "What he would do with the Duke if he got him down?" The honourable member does not profess the particular knowledge or skill by means of which a question so insidious, and at the same time so insidious, could be answered by any one, in the House or out of it—say by Lord ELCHO, or Mr. BERESFORD HOPE, or Sir EDMUND BECKETT. Even Mr. SHAW LEFEVRE, who in a certain sense is the maintainer, upholder, sustainer, and keeper of the Duke, would scarcely trust himself to say "what he would do with him if he got him down," until at least he had obtained a full and sufficient report upon the subject from the wisest advisers of his Office. Sir JAMES MCGAREL HOGG, in like manner, would not be able to say a word upon so important and delicate a subject until a vote had been taken at his Board. Even the "Members of Council" or Brahmins of the Royal Institute of British Architects might hesitate, and indeed be allowed to differ a little amongst themselves, before returning a reply to the PRIME MINISTER'S demand; and perhaps Mr. President HORACE JONES himself, with whom the First Commissioner appears to be on such sarcastic terms of respect, might prove to be more unequal to the occasion than of late he seems usually to have been.

The Duke in question is of course that magnificent work of art the Bronze Duke, cocked hat and feather, cloak, baton, and charger, now surmounting the Triumphal Arch at Hyde Park Corner—surmounting it like an Old Man of the Sea, misappropriating it, squashing it, choking it, exasperating it, turning it into ridicule, and in general turning itself into a disreputable joke as well; and all this simply because it is a good thing in a bad place—we are only sorry we cannot say so very good a thing as we can conscientiously say so very bad a place. Sir HENRY HOLLAND took no greater liberty with the Government than to express a hope that, when once brought down to the level of the ground, the Duke would not be hoisted up again to the level of the chimneys; and it was in acknowledgment of this guileless and humble trust that the Premier, like jesting PILATE of old, put his puzzling question and did not wait for an answer.

It is a standing rule with young and indeed middle-aged people of even the most modest culture, when first privileged to behold the great equestrian statue of the Duke of WELLINGTON on the Arch, to "wonder how the dickens it got there." It is not the policy of our journal to join in the cry which is often somewhat carelessly and thoughtlessly raised against metropolitan statuary; neither do we deem it at all necessary to despise this statue in particular, whose merits evil fortune for the last five or six and thirty years has displayed to such singular disadvantage; but we will endeavour to recall the facts connected with its unhappy imposition upon its most inappropriate pedestal, as some of our readers who are getting on in years will no doubt remember them.

Mr. MATTHEW WYATT was the sculptor employed to design a heroic portrait statue of the illustrious Field Marshal, then very old and very much honoured by all the world. It was duly modelled, duly approved in the studio, and duly cast in the metal of captured guns. We cannot recollect how far the artist had been expressly instructed so to design it as to accord with Mr. DECIMUS BURTON'S massive and graceful Arch as a pedestal, but when the time came that the public were informed of the intention to place it thereon a universal shout arose of indignation and scorn. It was quite characteristic of the English practice of the art "how not to do it" that the Triumphal Arch should be seized upon with avidity by those who were in charge of so big an image, as a pedestal which not only was big enough, and not only was cheap enough (that is to say costing nothing), but was appropriately situated just under the nose of the living hero as he

sat at his parlour window. The architect of the Arch firmly protested against the measure; the press and the public laughed consumedly at an artistic absurdity too palpable to be mistaken; the sculptor, however, insisted that he would have that very pedestal and no other; the Government authorities confessed themselves at a nonplus; and the veteran original of the effigy was therefore at last appealed to. Having already one heroic image dedicated to his honour constantly before his shrewd and sensible eyes at the back of his house, and being a man of no childish vanity and no inconvenient amount of taste, it was confidently expected that the Iron Duke would express an opinion that the bronze one might be better bestowed elsewhere, and many excellent people thought the thing was as good as so settled. But, like the diplomatists at Vienna, they had altogether misconceived the veteran's character. They forgot how very much of a soldier he still was. The old gentleman, whose reply to the lady who wondered how he could turn on so very narrow a bed was only that "when one wanted to turn, madam, it was time to turn out," with equal simplicity and modesty contented himself now with inquiring what had been the orders; to which the sculptor answering that he had been promised the Arch for his pedestal and claimed the fulfilment of the promise, what could the warrior do but declare in his favour? If Mr. WYATT'S perversity had happened to go so far as to demand the fulfilment of a promise that the effigy should stand—perhaps more appropriately—on its head, the Duke would doubtless have ordained also that stand on its head it should. As for himself, as he very probably explained, he was a perfectly impartial arbitrator; one place would do as well as another, and indeed one image as well as another, or no image at all as well as the best; but orders were orders and a bargain was a bargain. So the big horse and his rider were slung up by means of the proper mechanical powers, amidst the ridicule of all nations; and there up to the time present they have remained.

It having been resolved now to remove the Arch to another spot, of course it is necessary, as a preparatory measure, to lift off the ornament; and all rational people have been taking it for granted that even the chronic fatuity in art matters of an English Government would never go so far as to restore it to its perch on the new site. It is suggested that the edifice should be moved in the American manner, by being made to walk down Constitution Hill on centipedal screw-jacks; and, if we understand Mr. SHAW-LEFEVRE'S remarks, he would almost like to see the Duke—perhaps for the fun of the thing—riding on his pedestal all the way; so that it was in connection with this happy thought that Sir HENRY HOLLAND hinted his objection, and was met with the Ministerial challenge to say what was to be done with the ludicrously-disposed centaur if it and its pedestal were at length to part company. To this question, in artistic seriousness, not an inquisitive and hesitating member of Parliament perhaps, but the recognised artistic authorities of the public, must now furnish a proper answer.

Given the statue by itself, and supposing it had never been put where it is, how ought it to be provided with a fit and appropriate pedestal? It shall be our present purpose not to advocate any particular plan, but to remind our readers of general principles, and by way of commencement to repeat once more the oft-repeated argument of five-and-thirty years ago, that on no principle whatever—except the wanton repudiation of all principle—ought it to be perched as an ornament on the roof of a Triumphal Arch.

A statue of that character and size, even if it had many more gross faults than it has recognisable merits, is worthy of having a pedestal expressly designed for it. There is no lack of examples in point, although of course few of them are to be found in England. The purpose of design would be to accept the dignified motive of the statue, and emphasise it; not merely to give it vulgar prominence, or to enhance the effect of its magnitude, as some superficial critics might say, but to follow up the effect of grandeur and give it force; to accommodate to the surroundings, also, and to the sympathies of observers, the characteristics of the sculpture—the purpose, the attitude, the outline, the mass, in a word the whole idiosyncrasy of the work of art—with all its peculiarities, as legitimate factors of artistic effect.

The first question is whether to have a high pedestal or a low one. The artistic answer is that the skilful architect can design with equal facility either the one or the other; but it is not improbable, nevertheless, that a good deal of diversity of



opinion may prevail on this preliminary point. There are certain features in the design of the statue, and especially of the horse, which, when it reaches the ground again, may be held imperatively to require an elevated position. It may also be argued that a pedestal as lofty as itself, or even loftier, is academically essential to the dignity of a figure on so large a scale. On the other hand it is equally fair to urge that the majesty of scale may be better developed more on the level of the eye, and that a wide-spreading base with an inconsiderable altitude would be found more truly grand than a massive academical substructure, imposing in itself, but probably tending to dwarf the figure.

In either case the desirability of introducing supplementary figures comes to be a question of importance; and here many good authorities may advise *in limine* that nothing of the sort should be allowed to interfere at all with the simple majesty which the heroic group can best sustain in the calm repose of its solitary stateliness.

Whether a site should be selected in the open thoroughfare or in the more secluded park is another point for consideration. One thing may certainly be said here, that a confined situation would be unsuitable, and that to set up so large a figure on a narrow rectangular block, like so many of our English equestrian statues, would be little better than to restore it to the bad eminence of the Arch.

The urgency of Mr. WYATT in insisting upon so lofty an elevation awakens a suspicion that he may have been conscious of a certain coarseness of detail in his work, which, in fact, most observers fancy they perceive even at the height at which it is placed now. This, however, as we think, if it should be the fact, ought scarcely to be too readily accepted as a reason for removing the statue to a distance from the eye; it is quite within the resources of skill to adapt the design of a pedestal to this characteristic, and even to render it an element of masterly vigour.

Neither should we be disposed to admit that the sculptor had modelled his figures for the special foreshortening of an elevated position; even if this were positively asserted, there are many reasons for disregarding the assertion.

On the whole we will venture to express the hope that, as a mere act of common-sense, the opportunity will now be embraced of getting the Duke down to the ground for careful examination, and of considering thoroughly *de novo* what it is best to do with him for the interest of art and the substitution of even partial honour for universal ridicule.

#### PROPOSED EXCAVATIONS AT EPHEBUS.

THE success which in recent years has attended the Germans in their exploration of Pergamum, the Americans at Assos in the Troad, and the French at Delos—to mention only some of the principal events—has served to draw attention to the fact that in this line of research England, which used to be foremost, is now lagging behind. No one feels this more than Mr. WOOD, who knows that when excavations at Ephesus were stopped some years ago a considerable part of the work remained to be done. He had cleared the actual site of the famous Temple of DIANA, which he found under about 20 feet of alluvial soil. In the way of sculpture very little was obtained, and among several theories to account for its scarcity, a not unreasonable one is that in the fall of the temple the sculptures on the upper part of it—assuming that there were such sculptures—would be projected to some distance on all sides. To confirm or refute this view of the case it would be necessary to clear away on all sides the soil which now, like a great wall, shuts in the site of the temple. That is what Mr. WOOD, as we understand, proposes to do. The expense would be great, and the Government having declined to proceed any further in the matter, he now appeals through the Mansion House for public subscriptions. When it is a question of charity there can be no better channel of appeal. In archaeology, however, we are by no means starving just at present. Indeed, so great has been the increase of new material of late that we may rather be said to be overfed.

On the other hand, our right to revive the excavations at Ephesus may not last much longer. Add to this that Mr. WOOD offers his services, and we have at the present moment a conjunction of advantages which, it would seem, should not be neglected. He has had a long experience on the spot, longer perhaps than was necessary. But the problem is dif-

ferent now. There is, in fact, no problem at all. It is merely a question of clearing away the soil round the temple, and so far there is no need of any special skill. It is only in the case of sculptures or architectural members being found that the presence of an experienced architect is required, and in this respect we cannot say that Mr. WOOD—to judge by the book which he published giving the result of his excavations—displayed a talent. There is, however, no absolute need for associating the proposed excavations with him. It is natural for him to desire to complete what he had already carried so far, but we do not know that the subscriptions are invited for this particular purpose.

The Temple of DIANA at Ephesus was known at a late period of antiquity as one of the wonders of the world, and in many ways it may have deserved this title, as, for instance, with reference to the things it contained, a mere catalogue of which would, according to an ancient writer, have filled volumes. But it was not for the high style of its sculpture, if we may judge from the examples now in the British Museum. Such at least would be the judgment now. In late antiquity, doubtless, taste was different, as indeed the sculptures of Ephesus themselves prove, since there is every reason to suppose that for so rich a temple the best artistic skill of the time would be sought. In that case the best artistic skill of Ephesus was on much the same level as that of Pergamum when EUMENES or ATTALUS erected the great altar, and caused it to be adorned with the sculptures which have now found a resting-place in Berlin. That was about the beginning of the second century B.C. Hitherto it has been usual to assign the Ephesian sculptures to the lifetime of ALEXANDER the Great, on the ground mainly that he when at Ephesus asked leave to dedicate the temple. From this, however, it does not follow that the building was then complete; it may even have advanced only a little. At all events, the comparison with the sculptures of Pergamum is so striking that we cannot well avoid holding the date which is good for them to be good also for those of Ephesus, or at least nearly so. About the middle of the third century B.C. would be near the mark.

At Pergamum the base of the great altar is decorated with bas-reliefs on a colossal scale, and though we may admire to some extent the knowledge, training, and boldness of the artist, we are at the same time depressed with the absence of refinement, or even of careful thinking, both in regard to the execution and in the conception of the design. These sculptures, though exhibiting much cleverness, are essentially coarse, and as such agree very well with the spirit of the times in which they were produced. At Ephesus we have again a prevalence of bas-relief, and it will afford an instructive comparison with the sculptures of Pergamum if the large blocks which Mr. WOOD mistakenly assigned to the frieze should in the end prove to belong to the base of the temple. There is already no doubt that they supported columns; the marks made by the drip from the base of the columns are visible on the top of the blocks, and we believe it was Mr. FERGUSSON's view, in a paper communicated to the Institute, that the blocks formed great plinths or piers, each supporting one of those sculptured columns of which several drums were found by Mr. WOOD. To suppose that the base of the temple was sculptured in relief, and that access was obtained only by steps at each end, and these not extending across the whole breadth, would [be in itself a reasonable deduction from the actual facts; it is confirmed, as we have said, by the results of the German excavations at Pergamum. However this point may be settled, the comparison between the sculptures of the two places is a matter on which there need be no doubt. At Ephesus, as at Pergamum, we have the same knowledge and technical skill, the same desire for picturesque effect, which probably was at the bottom of the great preference for bas-relief in both places; the same sleight of hand, and the same incapacity of mind to catch a spark of true invention. This applies even to the much-praised and much-discussed sculptured drum, on which the figure of HERMES may to some extent be admired as indicating technical knowledge and a limited artistic power; while, on the other hand, the female figure before him is merely a scheme of drapery, under which there is no form, or, what is worse, next to no form. Yet this drum is greatly in advance of the sculptured blocks of which we have spoken. There coarseness reigns supreme, and without rival even in Pergamum.

It may be said, then, that if it is more of this kind of sculpture that Mr. WOOD expects to find, there is no



occasion to wish him any great success. In this, however, we do not agree, because there are many interesting problems still to be solved in regard to the later ages of Greek art, and especially in regard to the art of the third century B.C. Not only that, but, as has already been indicated, not a few questions remain concerning the Temple of DIANA itself which an extension of the excavations might reasonably be expected to settle, or go some way towards settling. Besides, it is always possible that in the immediate neighbourhood of the great temple there had been lesser buildings, and perhaps also sculptures, which had survived from older times. But of this the probability is not very great, since the fire—which, according to tradition, occurred on the night when ALEXANDER was born—appears to have destroyed the temple, and doubtless had involved the neighbouring structures in its ruin. The most interesting pieces of sculpture obtained by Mr. Wood were fragments from the older temple, and showed evident marks of fire. They were found under the later building, and if by new excavations more of them could be brought to light a very important service would be rendered.

### GAS AND ELECTRIC LIGHTING.

THE report just published by Lieut.-Colonel Festing, R.E., the assistant director specially entrusted with the charge of the museum buildings, South Kensington, including lighting, heating, ventilation, &c., states that during the past year the consumption of gas at South Kensington shows a decrease as compared with 1880 of 3,151,200 feet, costing at present prices 498*l.* 18*s.* 10*d.*, and as compared with 1879 of 5,381,300 feet, costing 852*l.* This decrease is attributable to the extension of the use of the electric light. Since May a second 16-light Brush machine has been at work, and the Raphael and Sheepshanks rooms are now lighted, as well as the Lord President's court. An alteration of the method of hanging the lamps in the latter has been carried out on one side, and, being found satisfactory, is now being applied to the other side; at the same time it is found advisable to raise the lamps a little, so as to get them more above the level of the eye of people in the galleries, and to add two lamps to each side. The disposition of the lamps will therefore be as follows:—Lord President's Court, 20 lamps; Sheepshanks Galleries, six lamps; Raphael Gallery six lamps; total 32 lamps. The expectation of an economy in working if two machines were driven by the engine has been amply borne out. With the two machines and 32 lamps the indicated horse-power of the engine is 38, and the consumption of coal per hour of work, a fraction under 112 lbs., as against 81 lbs. last year, when there were only 16 lamps. There has been also considerable economy in wages, as the only addition to this head has been for the trimming the additional number of lamps. Up to the end of the year the thirty-two lamps had been at work for nearly six months, or 346 hours of lighting. The cost of working has been as follows:—Carbons per hour, 2*s.* (per lamp per hour, 76*d.*); coal per hour, 10½*d.* (per lamp per hour, 33*d.*); oil per hour, 5½*d.* (per lamp per hour, 17*d.*); wages, per hour, 2*s.* 6*d.* (per lamp per hour, 94*d.*)—making a total per hour of 5*s.* 10¼*d.* (per lamp per hour, 22*d.*).

The consumption of gas in the same space would have been 8,600 cubic feet per hour, costing at the present price 1*l.* 7*s.* 2½*d.* The saving in working expenses is therefore 1*l.* 1*s.* 4½*d.* an hour, or at the rate of nearly 750*l.* a year, or more than 23*l.* per lamp per year.

It is interesting to compare with the results of working two machines with a steam engine here, those of working one machine and fourteen lamps with a twelve horse-power gas engine at Jermyn Street. The lamps there are lighted for a little over 400 hours in the year, and from one year's experience the hourly cost of the light is found to be as follows:—Carbons, 10½*d.*; gas for engine; 340 feet at 3*s.* 11*d.*, 1*s.* 4*d.*; oil, &c., 4*d.*; wages, 1*s.* 6*d.*—total, 4*s.* 0½*d.*

This gives a cost of 3½*d.* per lamp per hour. Of the 14 lamps, three are in places not hitherto lighted in the evening. The consumption of gas in the Museum was at the rate of 2,100 feet, costing 8*s.* 3*d.* per hour, the gas being of the quality known as "20 candles." The cost of 11 electric lamps representing this gas is 3*s.* 2*d.* per hour. The outlay on the installation, including motive power, machines and lamps, and a rather more ornamental treatment of the latter than has been attempted so far, may be estimated at 70*l.* per lamp, on which the annual saving on working expenses as determined at South Kensington will represent 33 per cent. This, however, necessarily depends upon the price of gas and the quantity of gas which each lamp replaces, and it is not possible always to arrange the lamps so that each may replace its full equivalent of gas. For some months the temporary reading-room of the Art Library has been lighted by Lane-Fox incandescent lights with very satisfactory results. The room is 50 feet by 20 and 18 feet high. Twelve Lane-Fox lamps replaced 15 Sugg's argand gas burners. The current is supplied by a "Brush" machine

driven by the gas-engine. This small experiment does not give much information as to the cost of this system of lighting, as the lights take only a small portion of the power of the machine. There seems to be little doubt, however, that the working expenses of lighting with incandescent lamps is about the same as the cost of gas burnt in the best argand burners. It is evident that no fumes can be produced by an incandescent lamp, as the heated carbon filament is enclosed in a glass globe which is hermetically sealed. For the same reason the only way in which heat is given off is by radiation. From a somewhat rough test with a thermopile it is found that the quantity of radiant heat given off by a Lane-Fox lamp is, for equal light, in the proportion of about one-sixth that emitted from a good argand gas burner (Sugg's "London"). It should be borne in mind that the radiant is but a small portion of the whole heat produced by a gas flame, the chief part of which passes away in the heated fumes. It is possible to remove these fumes from the room by pipes; and even if this be perfectly accomplished the incandescent electric light will have the advantage of giving only one-sixth part of the heat. But the difficulty of applying these pipes is in many cases very great, and they are necessarily expensive and ugly. The light of these lamps is almost as yellow as that of gas, which renders it unsuitable for cases where colour has to be carefully studied, and it was not found to answer for the life room in the art schools when a trial was made of it. The Brush (arc) light has also been tried, and as to colour was found very satisfactory. The heat given out is, in proportion to the light, considerably less than in the case of incandescent lights; but the unsteadiness was at times very great. It is hoped, however, to be able to correct this defect to some extent in some lamps which will shortly be put in the schools.

### ART LIBRARY AT SOUTH KENSINGTON.

THE report by Mr. R. H. Soden Smith, F.S.A., the Keeper of the National Art Library, has been published. He says that the attendance in the Art Library during the past year has decreased, the numbers being 25,462 against 27,339 in 1880, a large increase having then occurred over 1879. The numbers for 1879 were 25,453, a total which it will be noticed is nearly the same as that of last year. The portion of the structure for the new library which forms the reading-room is now ready to receive its internal fittings; the rooms in which a large portion of the collection must ultimately be kept are not yet commenced. The new reading-room, lighted from the top and from the north, is calculated, when completed, to give good accommodation to 180 readers. The number of volumes acquired has been 1,215. Among the works presented the most important is the great work on the Antiquities of the Russian Empire, consisting of six volumes of text and six volumes folio of elaborate illustrations; this costly publication was presented through the Director by the Russian Government; also from the same source, "L'Ornement National Russe, avec texte de W. Stasoff;" and another work on Russian Ornament in five parts folio. There may also be mentioned: four volumes on the Coins and Medals of Portugal and on the Roman examples in the Royal Cabinet by Senhor A. C. Teixeira de Aragão, presented by the author; "Artillerie, c'est à dire vraye instruction de l'artillerie, par D. Ufano," sm. folio, 1621, and "Traicte des Chiffres, &c., par Blaise de Vigenère," 4to., 1586, presented by Henry Willett, Esq.; "Marieberg's Historia," &c., 8vo., 1880; and "Rörstrand's Historia," &c., 8vo., 1879, both presented by the author, Herr G. H. Stråle; R. W. Cochran-Patrick, Esq., M.P., "Records of the Coinage of Scotland," two volumes, 4to., 1876; "Saggi istorici d'Antichità Toscane di L. Cantini," ten volumes, 8vo., 1796-1800, from Admiral De Kantzow. Among those purchased may be noted:—A very fine copy of Watteau's engraved works, two volumes folio, a book of which no desirable copy has previously occurred for sale in London for many years. "Musée Royal de la Haye," folio, Amsterdam, 1830; Bunbury, "Military Costume," 1791; "Military Costume of Europe," two volumes folio; Roller, "Les Catacombes de Rome," two volumes folio, 1881; "Black's History and Antiquities of the Company of Leathersellers," folio, 1871, with fac-simile of Charters, &c. A few additions have been made to the collection illustrating early printing and book ornament, among which may be mentioned—Brandt, "Von dem Anfang und Wesen der hailigen Statt Jerusalem," 1518; "Dance of Death," printed at Zurich, 1650; "Reynard the Fox," Hamburg, 1660, and another edition, Rostock, 1662. The collection of bookbindings has also had a few additions, among which may be mentioned a "Manuel des Oraisons," in a good French binding of the latter part of the sixteenth century; and a favourable example of modern French work in an edition of Boileau, bound for King Louis Philippe in purple morocco, richly tooled and ornamented with cyphers and *fleurs-de-lis*. Duplicates of important books have been secured when possible; among these may be mentioned an additional copy of "Chippendale's Gentleman's and Cabinet Maker's Director," folio, London, 1762. This book, which is no longer common, was purchased very cheaply in Lisbon, where the designs of Chippendale and other English art-workmen were much used in the last century; Clarac's



large work, "Musée de Sculpture," and Kretschmer's *Costume, "Die Trachten der Völker,"* 1864.

The number of original drawings added to the collection has been 586. Among these are 12 studies by Blake; 21 designs by Stothard; 178 designs for monuments and mural tablets by J. Bacon; some sketches of animals by Robert Hills, and others by Verboeckhoven; two highly-finished drawings in gold and colour, continuing the series supplied by Herr G. Fuchs, in illustration of the enamelled shrine of St. Alban at Cologne. The number of engravings acquired has been 1,820, including some additions to the valuable collection of ornament by the early German masters; a series of eighty-six engravings after works by R. Wilson, R.A.

The number of photographs added has been 1,845. Among these may be mentioned a series of 40 illustrating Russian art objects, presented by the Russian Government; a collection of 299 giving details of Italian architecture, sculpture, and painting; 179 of the drawings of old masters in the Royal Collection, Windsor; and 35 of the Grand Ducal Gallery of Paintings at Carlsruhe. Two thousand two hundred and sixty diagrams, drawings, prints, and photographs have been lent to Schools of Art institutions in the country or for use in the lecture theatre. The number of prints, drawings, and photographs either lent to art museums for circulation or exhibition or otherwise, in use out of the library, is upwards of 11,000.

Special classed lists of the books contained in the Art Library continue to be prepared, and are found serviceable to students and readers. That on painting was issued during the year; it is divided into twenty-two classes with sectional subdivisions, and gives the titles of 812 works bearing on the subject. A classed list of costume, prepared by Mr. Alfred Maskell, was also issued, including 1,170 titles.

### LEEDS CASTLE.

A PAPER was read by the Rev. Canon Scott Robertson at the meeting of the Kent Archæological Society descriptive of Leeds Castle, Kent, the seat of Mrs. Wykeham-Martin, the following being an extract from the paper:—

This remarkably-fortified dwelling is surrounded by the largest moat in England. Originally it occupied three distinct islands. On one stood the barbicans; on the second and largest island were the gatehouse and guardrooms, with a large bailey or courtyard, and beyond was the lord's dwelling; on the northernmost island stood the keep, which still remains. The barbicans, now in ruins, are seen as we approach the gatehouse, and the ruined water-mill is beside them. Much of their masonry is of the thirteenth and fourteenth centuries. The gatehouse contains remains of the Early English building dating from the reign of Henry III. or John; it was raised in height by Edward I., and the machicolations were probably added by Richard II. The lord's dwelling was rebuilt in the time of James I.; but the Jacobean house was pulled down in 1821, and the present dwelling was built in 1822 and following years, when stone arches were for the first time placed beneath the ancient bridge between it and the old keep. Previously there had been bridges of wood between the two buildings and the central stone pier, and portions of these wooden bridges had been originally movable, as drawbridges. When the Domesday survey was made in A.D. 1086, Odo, Bishop of Baieux, had here a park and two arpents of vineyard. From the mention of the vineyard as well as the park, we cannot well doubt that a castle stood here in Bishop Odo's time. After the bishop's disgrace, Leeds was granted to a knight named De Creve-cœur or De Crepits Corde, whose name would now be called Croker. Seven generations of this family possessed Leeds during about 175 years. One of them founded Leeds Priory in A.D. 1119, and some portions of the foundation of his castle here may still exist. A cellar, 60 feet long, which extends beneath the modern residence from its front door to the grand staircase, is said to be of the twelfth century. It has somewhat the appearance of being hollowed out of the solid without any vaulted masonry at all. The foundations of the old castle are also thought by Mr. G. T. Clark to be those of a shell keep, either Norman or Early English. We find the fortress mentioned by chroniclers during the reign of King Stephen as having been seized in 1138 by Robert, Duke of Gloucester, a partisan of the Empress Maude. From him, however, it was rescued by Stephen.

In the contest between the barons and King Henry III. the owner of Leeds Castle fought with the barons at Lewes against the king. Consequently his estates were forfeited, and on November 30, 1265, Leeds Castle was granted to that distinguished and loyal Kentish knight, Sir Roger de Leybourne, who occupied the castle after he obtained possession of this estate; and when he was Lord Warden of the Cinque Ports he regarded Leeds Castle as his principal place of residence. As he died in 1271, his tenure was very brief. So much litigation ensued with the Creve-cœurs, that Roger's son, Sir William de Leybourne, was glad to alienate Leeds to King Edward I. and Queen Eleanor. This he did between A.D. 1271 and 1279. Mr. Wykeham-Martin traces his

descent back through the Lords Say and Sele to Idonea de Say, daughter of Sir William de Leybourne, and it was very remarkable that the estate should return to descendants of the family which held it so many centuries since. During the next two hundred and seventy years Leeds Castle was a royal domain, and for about the first half of that period it formed part of the dowry of successive queens. The good Queen Eleanor of Castile was the first on whom it was settled. Her royal husband, Edward I., delighted in rendering this castle stronger and more perfect as a fortress. Several important State documents, dated from Leeds Castle, prove that Edward I. resided here on seven different occasions in five of the years which intervened between 1279 and 1289. When the beloved Queen Eleanor died, on November 28, 1290, the king caused the anniversary of her decease to be observed with great magnificence in the chapel of the castle here. So stately and splendid was this anniversary celebration, that upon it was expended no less than 25%, which would then be equivalent to about 375% of our money. The king likewise founded and endowed in the castle chapel a chantry of four canons and one clerk, who should pray daily for the repose of Queen Eleanor's soul. When Edward I. visited Leeds in August 1289 it would appear that he planned the construction of a swimming-bath, which still exists, and is used as a boat-house. This bath was commenced a few weeks before Queen Eleanor died, and it is probable that grief for her loss kept Edward from ever again visiting Leeds; so that we believe he never used the bath which he had planned. It was paved with large slabs of Reigate stone, and protected by two wooden sluice gates.

Queen Isabella, on a pilgrimage to Canterbury, came hither, desiring to pass the night at Leeds, and as the reversion of the castle, after the death of Queen Margaret, had been legally settled upon her in 1314, she had full right to demand entrance. The king, however, had actually given the fee simple of the castle to Lord Badlesmere; and, as possession is nine points of the law, Lady Badlesmere refused to admit the Queen, and resisted her efforts to force an entrance. A siege of the castle was the consequence, and Edward II. summoned all loyal knights of Kent, Surrey, Sussex, Hants, and Essex to muster at Leeds, from October 20 to October 23, 1321. The king himself arrived on the 26th, and the castle being captured by his forces, Edward remained there till November 4. The castle having been seized, its lord was not long at liberty. Lord Badlesmere was hanged in Blean, and, according to the barbarous custom of the period, his head was fixed over the Burgate of Canterbury. Several of his supporters were also executed. In the reign of Richard III. Leeds Castle was settled upon his queen, Anne of Bohemia.

King Richard resided here for a day or two about 1392, and for one or two weeks in July and August 1395. During the latter visit he received Froissart, the chronicler, here; and from Leeds the king dated those writs by which the Chancellor of Oxford was bidden to expel Lollards from the University, and to cause Wycliff's book ("Trialogus") to be examined. Later on, the same king was brought to Leeds as a prisoner, consigned hither by Henry IV. That successful usurper was here himself in April 1401; and he settled Leeds Castle upon his wife, Queen Joan of Navarre, in 1406. This king granted the use of the castle to Archbishop Arundel, who probably became constable of Leeds, as he did also of Queenborough Castle. Several documents are extant, which he dated in 1412 from "our castle of Ledes."

In 1425 Queen Katherine of Valois, widow of Henry V. and mother of Henry VI., was put in possession of Leeds Castle. She retained it until she died, which happened a few months after that of Queen Joan of Navarre, in 1437; but whether Queen Katherine, the wife of Owen Tudor (grandfather of Henry VII.), actually resided here we cannot ascertain. Before her death, however, many additions to the building had been made, and much was done in the way of repairs. Amongst these works may be mentioned the insertion of the curfew bell now hanging in the tower, which still rings the knell of parting day at eight o'clock every evening. It is dated "Pan 1435," and is adorned with representations in low relief of the Virgin and Child, of our Lord's Crucifixion, and of St. George and the Dragon. Henry VI. seems to have visited the Castle soon after the death of his mother; the exact date of his coming is not known, but it was about 1437 or 1438. Under Sir Henry Guldeford's management the existing "Old Castle" assumed the shape which it now has, and the Maiden's Tower was built. He commenced repairing the Castle as early as the year 1517, and he continued the work during six years at least. For the cost of these prolonged building operations he received large sums annually from the king's privy purse; sometimes 200*l.* and sometimes 300*l.* in a year. In 1520 Henry VIII. determined to visit the Castle when going to meet the Emperor and the French King. Then special efforts were made to push on the works here in preparation for the King's arrival. No less than 426*l.* was therefore drawn from the royal purse for repairs of Leeds Castle during the months of February, May, and June, 1520. Nor was all then finished; three years later we find the King paying 150*l.* more to Sir Henry Guldeford for the buildings at the Castle of Leeds. While the Court remained in France, on the occasion of the celebrated meeting between Henry VIII. and Francis I. at the Field of the Cloth of Gold, bucks were continually sent over from the park at



Leeds to supply venison for the tables of the vast assemblage encamped at Calais and Guisnes.

The Castle passed by purchase into the hands of Lord Colepeper about the year 1632. His only daughter, Catherine Colepeper, resided here with her mother, and married Thomas, the fifth Lord Fairfax. She died here in 1710, and the name of Colepeper ceased to have any connection with Leeds. The Fairfax descendants of her daughter the Colepeper heiress, however, remained in possession until A.D. 1800. General Philip Martin was the last owner of Leeds who had in his veins any blood of the Colepepers or of the Fairfaxes. No near relations survived him. He bequeathed his estate to his second cousin once removed, Fiennes Wykeham, son of Richard Wykeham, a descendant of the Lords Say and Sele, and of Sir Roger de Leybourne, who possessed Leeds Castle for a short period 500 years ago. General Martin left 30,000*l.* for the restoration of the Castle, and this fund was judiciously expended by Mr. Fiennes Wykeham, who took the addition name of Martin. He pulled down the Jacobean residence of the Smythes, and erected the present dwelling-house of noble proportions.

### THE NATIONAL ART COMPETITION.

THE report of the examiners in the Competition for National Medals in 1881 has just been published. It states that the number of drawings sent up from schools of art for examination was 197,048 from 157 schools of art. Of these works, 1,218 were referred to the National Competition, being 229 more than in 1880, when the number was 989. In these works a general improvement has called for the award of so large a number of the higher distinctions, that only those are exhibited in respect of which medals or Queen's prizes of books in the National Competition have been awarded.

The examiners for Figure Drawing and Painting were Messrs. G. D. Leslie, R.A., W. F. Yeames, R.A., E. J. Poynter, R.A., Director for Art, and H. A. Bowler, Assistant-Director for Art. They report that in the competition for the medals for drawing from the Antique and the Life a decided improvement was observed. The competition was more equal than in previous years, owing to the rule forbidding the use of backgrounds in chalk studies, which has left the students more free to observe the niceties of form in the contours of the figures selected. The Gold Medal for the Antique was awarded to a figure of Silenus nursing the infant Bacchus, from Edinburgh. To Edinburgh also was awarded the Gold Medal in painting from the Antique, in which a background is admitted, for a monochrome study of the same figure, excellent in its treatment of the head, but in which the modelling of the limbs might have been carried further, as is shown by comparison with the chalk study. The Gold Medal for the drawing from the Life was awarded, with some hesitation, to a drawing from South Kensington, to which the least objection could be made, and which was characterised by a graceful treatment of a thin and delicately-marked figure. A Gold Medal was well earned by a painting of a nude figure from Birmingham, which was quiet in colour, firm in drawing, and well-considered in tone and in relation to its white background, though its effect was injured by incompleteness in the parts a little removed from the figure. The Examiners recommend that in future a special Silver Medal shall be offered for a study, in light and shade only, treating a number of objects with especial reference to "tone," and the true expression of their relative force in light and shade and their position in the picture. The subjects of these studies may be objects of still life, casts of ornaments, or combinations of these. This will supplement the drawing from the Antique, now treated without background, by a form of study for which the Antique figure has been in some schools too exclusively used.

The examiners for Design with Architecture and Modelling—Messrs. J. E. Boehm, A.R.A., William Morris, J. J. Stevenson, and the Director and Assistant Director for Art—state that the Gold Medal for architectural design was awarded to a design for a cathedral, somewhat grandiose, showing also imagination and a sense of beauty, though not quite practicable for execution. A second Gold Medal was given to a set of drawings showing an admirable method of study. Well-selected examples of church porches had been visited, measured, and carefully drawn in preparation for designing a number of porches in the historic English styles. The drawings were well executed in pen and ink, and the filling in of the tracery openings with dead black, which gave an ugly and untrue effect to some other drawings, was avoided. In a design for a candelabrum for a synagogue, remarkable for careful study of classic forms and ingenious application to its purpose, though unsuitable from the introduction of figures, the conventional form of the branches for seven candles was gracefully treated and thoughtfully enriched. It gained a Gold Medal. In Modelling, the excellent teaching of the instructor at South Kensington secured almost all the prizes for that school.

In the section of Design the examiners were Messrs. H. S. Marks, R.A., W. Morris, J. J. Stevenson, and the Director and Assistant-Director for Art. They say that a Gold Medal was awarded for a carpet from Salisbury of good colour, carefully designed, and well expressed in the drawing, the various parts

being in good proportion, and the border especially well treated. A Bronze Medal was awarded to another carpet for good colour and design, though wanting in constructive knowledge; and a Book Prize for one treating the thistle cleverly as regards form, though failing in colour. Generally the works in this section suggest the observation that too much interest is shown in ingenious twisting of the plant forms used in the designs, and too little pleasure in colour, which should be the first consideration in a carpet. Wall decoration was represented by numerous carefully-executed works, especially from Nottingham, in one of which the Guelder rose was ingeniously conventionalised. The use of gold is too readily resorted to, and designs are too frequently put on a black ground; black and gold no doubt form a safe combination with which almost any colour may be made tolerable, and the difficulties of combining pure tints are thus evaded in many cases; moreover, the pattern would have had a better effect on a white or some other light ground, but many of those exhibited would have made the walls of an ordinary room oppressive. Lace designs were as usual beautifully executed. Gold Medals were given for designs showing a just distribution of textures of thick and thin work, and a genuinely artistic conventionalising of plant forms and flowers in design for pillow lace which came from Dover. The designs for Pottery were discouraging. Students seem to have studied the current show in shop windows rather than examples of work of the best periods. Little skill was shown in the proper conventionalising of plant forms. The designs were frequently merely direct copies of bunches of flowers, not even well placed on the surface to be decorated. Ribbons also seem to have been designed without thought, mere vulgar copies of flowers, and those not well done. One sheet received a small award for evidence of a somewhat better treatment. Designs for white damasks exhibited want of appreciation of the opportunities this fabric offers for beauty to be obtained by the interchange of shades of white, which when skilfully employed should depend rather on agreeable distribution of quantities than on arrangements based upon flow of line. The exercises in Design, which were too much confined to simply covering a given space with mere repetition of accidental forms, would have been better if based on selected geometrical lines, to which floral forms derived from nature should be applied. The analysis of plant forms, valuable as a study, is still too much used for supplying in the place of design mere mechanical arrangements.

The examiners for Painting in Oil and Water-colours were Messrs. H. S. Marks, R.A., L. Alma-Tadema, R.A., Val Prinsep, A.R.A., and the Director and Assistant Director for Art. The works representing still-life in oil and water-colour excited the admiration of the examiners, which was expressed by a large number of awards. The Gold Medal for oil painting was gained for the Liverpool South District School of Art by a firmly-executed imitative painting in a large style, in which the objects represented kept their places in their various planes remarkably well, owing to the truth of tone in the work. The effect of many of the oil studies is lost by the too great use of mediums. The most successful water-colour work was distinguished by similar qualities, and was a pure, broad, carefully-finished, and effective drawing painted in washes, with close attention to truth of tone and light.

The useful study of drapery should be more general.

### THE GHENT EXHIBITION OF INDUSTRIAL ART.

THE first exhibition of industrial art organised by the *Chambre Syndicale Provinciale des Arts Industriels* was opened in Ghent on August 12, 1877. The exhibition comprised two sections—the modern and the antique—representative of modern house-furniture, carved oak work, inlaid work, &c.; also textile fabrics of every description, specimens of Belgian lace, ceramic ware, crystal, and jewellery, along with highly-finished iron and metal work in mediæval style, tapestry, ivories, glasswork, &c. The *Chambre Syndicale* was founded at Ghent in 1866 for the purpose of "stimulating the genius of artistic creation in relation to industrial applications, contributing to popularise the study and sentiment of the beautiful in the production of industrial objects," and its first exhibition exerted a distinct influence on the manufactures of the country; but it was noticed that the art of industrial drawing had not kept pace with the demands of manufacture. As it was impossible to organise an exhibition every year, the *Chambre Syndicale*, with the special object of improving the art of industrial drawing, and of improving the position of the draughtsman, instituted an annual competition in designs, to which was added an exhibition of illustrated works bearing upon the subject. At the first of these competitions, which was held in 1879, there were ninety-nine entries for the nine competitions, seven first and seven second prizes being awarded. In the following year there were over a hundred competitors in the twelve competitions, the first prizes being withheld in only a few instances. Last year the number of competitions was increased to twenty, and included designs for a ceiling, an entrance door, a cast-iron pump, a wrought-iron balcony, a staircase, &c., the first prizes being withheld in five cases, while the number of entries are gradually increased. For the present year the



Chambre Syndicale announce an exhibition of industrial art, to open in the halls of the Ghent Casino on August 28, and to continue until October 18 following. Like the former, it will comprise two sections:—1. Modern, including (a) a general exhibition of objects of industrial art manufactured in the country; (b) competitions in designs for such objects; and (c) competitions in manufactured objects. 2. A section of objects anterior to the nineteenth century, relating to industrial art, Belgian or foreign. Besides the prizes in the competition, medals of silver-gilt, silver, and gold, as well as honourable mentions, will be accorded to such exhibits as evince the greatest merit in design, taste, and execution, or which illustrate a new industry; while medals will also be granted to the designers of successful exhibits. It is expressly desired that the selling price be affixed to the exhibits. Works intended for competition, which must be strictly original, are to be deposited anonymously before August 12, a clause which, it is announced, will be rigorously observed. The competitors are not restricted to Belgians, but are extended to those who have lived three years consecutively in that country. The committee reserve the right to purchase the works entered at the prices stipulated in the programme.

The following is the classification decided upon for the modern section of the forthcoming exhibition:—

*Building.*—Ornament in stone, carton-pierre, plaster of Paris, artificial stone, &c.; natural and artificial marbles, pavement, &c.; joinery, including doors and floors.

*Furniture and Decoration.*—Decorative painting on stone, wood, cloth, graining and marbling; cabinet making, including furniture in which wood predominates; furniture with the application of marquetry and inlaid metal work, including carriages and sledges, pianos, and articles of furniture connected with telegraphy and telephony, wood frames, gilded or not, for mirrors, pictures, &c.; earthenware and porcelain, moulded and cut glass; stained and engraved glass, mirrors, wall paper and imitation leather.

*Metal Industry.*—Goldsmith's work, jewellery, watchmaking, engraving on cameos, &c.; enamelling, nickelising, chasing, &c.; ecclesiastical art, artistic bronzes, wrought and cast iron, clocks, appliances for lighting and heating, stoves, fenders, &c., electro-metallurgy, arms and cutlery, wrought and cast iron-work, including balconies, articles in brass and zinc, the panels of doors, gates and locks, door-handles, bells, knockers, &c.

*Textile Industry.*—Various wove fabrics, shawls, &c.; book-binding, tickets, &c.; printing, engraving on stone, on wood, on zinc, and on copper, chromo-lithography; photography in its application to industrial art, to the exclusion of portraits and landscapes (the proofs must be permanent, i.e. obtained by the carbon process, heliography, photo-lithography, &c.); models for the teaching of drawing, reproduction of objects of ancient art in plaster and wood, or by electro-metallurgy; materials for the arts of painting and drawing; designs and models of industrial art, &c.

The competitions of the first series include designs for a mantelpiece, a funeral monument, a candelabrum for gas, a book-case, a cabinet, a staircase window, a pulpit, an ecclesiastical gaselier, a carpet in seven colours, and an epergne; and of the second series (executed works), the furniture and decoration of an office, a staircase *jardinière*, a telescopic table, four chairs, a porcelain dinner service, a table-cloth and dozen napkins, an ecclesiastical lamp, artistic and economical bookbinding, and a *courouse* carriage.

The Président d'Honneur is M. Léon Verhaeghe de Naeyer, Governor of East Flanders; the president, M. Constant Verhaeghe de Naeyer; and the secretary, M. Emile Varenbergh, Ghent.

### PRIORY OF ST. PANCRAS, LEWES.

EXCAVATIONS of a highly interesting character are, the *Sussex Advertiser* says, now on the point of being undertaken in the grounds of the ancient Priory of St. Pancras at Lewes, under the direction of Mr. Somers Clarke, jun., F.S.A., and under the local supervision of Mr. W. H. St. John Hope, of Cambridge, whose name is well known to antiquarians. The researches promise to be of national interest. The Priory of St. Pancras, founded by William de Warrenne and Gundrada, is one of the most ancient specimens of Norman architecture in this kingdom. Considerable historical interest attaches to the building, partly on the ground that it is one of the very few houses of the Cluniacal order once established in this county. The Cluniacs were noted for the splendour of their appointments, the magnificence of their churches, and the openness of their hospitality. The great Monastery of Clugny, in Burgundy, possessed a church which was exceeded in size by few, if any, in Europe. Its plan presented the unusual feature (in France) of eastern and central transepts; a plan we find in England at Canterbury, Lincoln, Beverley, and several other places. It is evident that the great church at Lewes was planned in the same way. The foundations of the eastern portion of the great church, and also part of the chapter-house, were laid bare in the year 1847, at the time of the construction of the Brighton and Hastings Railway. The bones of the noble founders were also discovered. Since then nothing has been done. It is,

however, sufficiently evident from an examination of the remains, and a comparison with others of a somewhat similar nature, that beneath the surface must lie a large portion of the nave and choir of the church, together with the bases of the western towers; also the substructures of the dormitory, refectory, infirmary, and other important adjuncts connected with a monastery of the first importance. A rough description by Portenari, who superintended the demolition of the church in 1537, gives a list of the number of pillars and the dimensions of certain parts of the building. It is now intended to open up the rest of the ruins.

### ROMAN CAMP AT BIRDOSWALD.

A VISIT was paid by the members of the Royal Archæological Institute to the Roman Camp at Birdoswald. While inspecting the ruins of the eastern double gateway Dr. Bruce made the following remarks on the Roman wall. He said it was known that Agricola came in the year 80; and before he advanced into Caledonia he left several bands of troops located in strong posts from which they were never driven. He fancied that this at Birdoswald was one of Agricola's camps. The position was a remarkably strong one. It was well defended. In the year 120 Hadrian came to the camp, finding the country in great disorder and requiring his personal attention; he built a wall, and he seemed to have made use of such of Agricola's stationary camps as suited his purpose in laying the line of his wall. This wall consisted of two parts. One was a stone wall 8 feet thick, and how high they could not tell—probably about 16 or 17 feet. On the north side of this wall there was a ditch or fosse, and frequently material was taken up to form an additional rampart. As they went along they would see the fosse frequently. On the south side of the stone wall, from Newcastle to within a short distance of the termination of the western end at Drumburgh, there was an additional fortification—three earthen ramparts parallel to one another, with a fosse between the first and second of them, nowadays called a vallum, or earth or fosse wall. Between the two walls there ran the road by which supplies were carried, and portions of the road were quite distinct and perfect to the present day. To the east of them they had it for ten miles together. Another feature of the wall was the accommodation made for the garrison. In all probability it took 15,000 troops to garrison the wall. At the average distance of four miles there was a station, such as this on which they were standing. The station or mile castle consisted of a series of buildings about 60 feet square. Between these mile castles there were three or four turrets about 10 feet square, the walls of which were about 3 feet thick. He called them stone sentry boxes. One feature of these stations was the gateways. They had here a remarkably good specimen of the gateway, and they were all built on the same principle. The gateway was a double one, usually about 11 feet wide. These gateways were arched over. On each side of the gateway was a guard chamber. He pointed out the sites of the guard chambers, which had been filled up, and, continuing, said that opposite the arch in front there was an inner arch, and the gateways were in a double sense double. They frequently saw marks of the pivot holes of the gate. There were pivot holes at the bottom and at the upper part, so that in order to put a gate in its place they had to lift it up through the upper hole and let the gate down into the bottom one. This station was the largest on the wall, and consisted of five acres and a quarter. The one next in size was at Chesters, on the North Tyne. Both of these camps had the peculiarity of having two gates on the eastern and western sides. Usually in every other instance the Romans had four gateways, at north, south, east, and west, and roads going from one to the other about 18 feet thick. Minor streets in the camp were very narrow, scarcely enough to let two to pass, the object being to show as little face to the enemy as possible. The gateway immediately opposite to them had tumbled in, the ground having given way, and the other was a single one. The wall went right away from the east. They saw a series of serrated hills over there. These were called the "Nine Nicks of Thirlwall," the wall having been *thirled* or pierced there first of all. For ten miles the wall went through a basaltic dyke, and this dyke was steep towards the north, and the wall was on the top of that again, giving a strong defence against the Caledonians. It came along and crossed the Irthing, and then came up a steep ascent. Always in the vicinity of a Roman camp they had suburban buildings. In addition to the troops they had camp followers, and they occupied generally the sunny side of the slope. At this eastern side they had extensive remains of suburban buildings. Generally the prefect or commander of the cohort had a villa outside the walls. In times of peace and quietness he did not like to be cramped up in the camp, and he had his villa outside. He did not think they had any trace of it here.

The vallum and the wall did not run parallel. The wall caught rising eminences, and the vallum ran more in straight lines, and usually by the tail of a hill. Sometimes the wall and vallum were a quarter of a mile apart, and sometimes as close together as possible. The question bore on who built the wall. The vallum going along the tail of a hill, leaving great elevations to the north of it,



would give a great advantage to the Caledonians; and that was one reason why they fancied the two works were the work of one engineer. Some of the better buildings of the camp were warmed by a hypocaust. In all the Roman camps they had hanging floors; and they had a furnace at one extremity which warmed the air, and this heated air was carried underneath the floors and up the sides of the house, so that a small quantity of heat produced great effects. The floors were perhaps 9 feet thick, and the system of heating had one advantage. If the furnace were ever so hot it did not immediately affect the temperature of the room; or if the fires went out it was a long time before the cold was experienced. The heat would be kept constantly uniform, and would be greatly economised. There was no doubt that the Romans used coal. They found coal and coal ashes in their stations. The Romans were particularly careful to be in the vicinity of good water. He did not think they were fond of having a well in the stations. There was a well in the camp at Maryport, but they usually had the water outside. In this instance there was a well in the middle. The last time the Institute was at the camp they found there was a tank there. The water was brought from a considerable distance by means of a conduit under ground, and arrangements were made for filtering the water. Remains of charcoal were found, and it was believed that the water before being used passed through sides made up of gravel and of charcoal.

The Romans built the wall on the north of rivers. The object of this was to secure the fertile land of the valleys, and further, when driven from the wall, to have an additional barrier in the river. As to the shape of the stones the Romans no doubt made the ancient Britons work at the wall, and the stones were usually 8 or 10 inches square in the front, and almost always cut across the line of stratification, so as to stand the weather. He had seen them 2 feet long, so as to get a good grip of the wall, and they were always wedge-shaped, tapering smaller at the inner end than at the outer. The mortar was harder than the stones. There were no tiles used in the wall.

Passing to the southern gateway, Dr. Bruce pointed to the remains of a circular vault next to the western guard chamber, which he thought must have been used for drying wheat. In this country the corn did not ripen quickly, and they required to dry it. He drew their attention to the corners of the camp, and said they were always rounded. The reason of this was that the Romans, when they came to build the wall, first of all made themselves secure within good stone ramparts, and they built a camp independently of the wall, and adopted the plan of rounded corners. The remains of the north gateway were in the road. Before leaving the south gate he read a passage from the late Earl of Carlisle's "Diary in Turkish Waters," in which, speaking of a view at the supposed site of Troy, he said the best notion he could give of it to a Cumberland borderer was by telling him that it resembled the view just outside the camp at Birdswald.

## THE SCIENCE AND ART DEPARTMENT.

THE twenty-ninth report of the Science and Art Department of the Committee of Council on Education, just issued, states that the number of persons who have during the year 1881 attended the schools and classes of Science and Art in connection with the Department are as follows, viz.:—61,177 attending science schools and classes in 1881, as against 60,871 in 1880; and 917,101 receiving instructions in art, showing an increase upon the previous year of 79,793. The attendance at the Art and Educational Libraries at South Kensington and the National Library of Ireland in 1881 has been 84,949, or an increase of 765 over that of last year. The museums and collections under the superintendence of the Department in London, Dublin, and Edinburgh were last year visited by 2,464,538 persons, showing an increase of 132,095 on the number in 1880. The number of visitors to the South Kensington Museum has increased from 981,963 in 1880, to 1,017,024 in 1881. The returns received of the number of visitors at the Local Art and Industrial Exhibitions, to which objects were contributed from the South Kensington Museum, show an attendance of 1,361,900 persons, as against 696,541 in 1880, or an increase of more than 95 per cent. The total number of persons who during the year 1881 attended the different institutions and exhibitions in connection with the Department has been 4,811,258. This total, compared with that of the previous year, presents an increase of 876,103.

New schools of art have been established during 1881 at Bedford, Bournemouth, Burton-on-Trent, Chiswick, Hertford, Ilkley, South Shields, St. Albans, Waterford. The total number of schools of art in operation throughout the kingdom was 160, with 11 branch classes. The total number of students in these schools and their branch classes was 31,592. At the annual examination in April 1881, 19,940 students submitted 197,048 drawings or models; the corresponding numbers in 1880 having been 19,338 students, and 170,383 works, so that the annual increase reported in previous years is still maintained. In this examination 17,361 students, on account of whose instruction payments were made to the committees of the schools, were of the industrial

classes. The examinations in second grade drawing were attended by 11,994 students of schools of art, of whom 4,521 were successful, and 1,180 obtained prizes. The corresponding totals in 1880 were 10,949, 6,022, and 1,934 respectively.

The number of students in art classes was 23,026 in 584 classes, the corresponding numbers in 1880 having been 26,646 in 632 classes, and in 1879, 29,323 students in 732 classes. This decrease in 1880 and 1881 as compared with 1879 is attributable to the extended operation of the rule requiring a higher certificate to be held by teachers of art classes. The number of students in these classes who attended the examination in drawing of the second grade was 11,322, of whom 2,905 passed the examination, and 600 obtained second grade prizes; while 428 obtained prizes for works sent up for inspection. The total number of works sent up from art classes for examination in April was 168,720 by 13,187 students.

## PROTECTION AGAINST FIRE IN THEATRES.

IN a paper read before the members of the American Franklin Institute, Mr. C. J. Hexamer stated that a list of fires in theatres, compiled by himself and necessarily incomplete, showed that 150 theatres had burnt down in the last 100 years. This study of the subject had led him to conclude that destruction by fire is the natural end of theatres. Various devices have been used to render the decorations more incombustible. The flies have been made of wire gauze and the interstices filled with an incombustible material, giving entire security against fire, but rendering the flies inconvenient to handle, on account of the weight. Water glass, which has been used as a fireproof paint for scenery, has been found to change its chemical composition after a time, and to then give no further security. The same deterioration is found to exist with several other substances which have been tried, and it would seem from experience in the Paris theatres that combustibility of scenery was even ultimately increased in some cases by the application of protective substances. When water glass is used the water colours employed in scene-painting may have dissolved the greater part of the silicate at the start. To obviate this some incombustible substance might be precipitated into the fibres of the canvas. For instance, after thoroughly soaking the canvas in water glass it should be placed in a dilute solution of hydrochloric acid; which would precipitate the silica inside of the fibres of the yarn itself. The silica, being insoluble in water, could not be washed out, and on account of its precipitation in the fibres could not readily be thrown out. The combustibility of scenery is also lessened by painting it on both sides, thus destroying the fuzz on the back of the scenery along which the flames spread; simply whitewashing the back of the scenery would be useful for the same reason.

But before the scenery is attended to it is necessary that the building itself should be of proper construction. The rear and two sides of the stage (including green and dressing-rooms) should be enclosed by thick brick walls. The roof and roof-trussing should be made as nearly as possible fireproof, as the rigging loft is generally attached to the roof-trussing. To divide the stage from the auditorium a wire drop curtain becomes necessary, which should be kept in perfect order and be automatic. "It should be let down after every performance, and should not be raised until fifteen minutes before the beginning of the performances." This would insure its being in good order. Proscenium boxes should be of brick or iron, as some of the stage settings are very near them, and in case of fire these boxes might be ignited in the time required by the curtain to lower itself. The wall dividing the stage from the auditorium (proscenium wall) should be of brick; starting from the foundation, it should be broken by the stage opening and orchestra doors only. Above the stage opening an arch should be sprung, and the wall carried up on this at least 18 inches above the roof. The joists and flooring boards of the stage should not extend beyond one foot of the proscenium wall, as they would transmit flames to the woodwork of the orchestra. In the same manner, the joists of the parquet should extend merely to this wall, and by no means through it. The doors contained in this wall should be lined with iron, as solid iron doors in great heat soon become warped and useless, while iron-lined doors in the greatest heat retain their shape. All doors in fire-walls should have springs or weights attached to them, so as to be at all times closed. They can be closed automatically by a weight, which is released by the melting of a piece of very fusible solder employed. One of the chief dangers of theatres is in the numerous gas flames, in dressing-rooms as well as on the stage, and all gas brackets should be protected by wire baskets, and swinging brackets be abandoned. Foot and border lights should be protected by wire screens and lighted by electricity, and care should be taken to keep the flies at a proper distance from the lights.

**Cardiff.**—The memorial stones of a Methodist chapel at Cogan Pill have been laid. Mr. Peter Price, of Cardiff, is the architect, and Mr. Marshall, Grangetown, the builder. The building is designed in the Gothic style, built of local stone. There will be sitting accommodation in the new building for 500 persons. Underneath will be vestries, where about 300 children can be taught.



## NOTES AND COMMENTS.

THE Glasgow Institute of Architects, in deference to the wishes of many of the architects engaged in the late competition for the proposed new Municipal Buildings at Glasgow, as also in accordance with the wish of the general public, have undertaken the management of an exhibition of the preliminary sketch designs submitted in the earlier stage of the competition. Rooms in the Corporation Galleries have been put at the disposal of the committee by the Town Council for the purposes of the exhibition, which it is intended shall be open from September 2 to September 14. It is desirable that all the competitors should endeavour to meet the wishes of the committee by sending up their sketch designs, so that the exhibition may be thoroughly representative of the work which has been done in connection with this important competition.

THE magnificent collection of bronzes, ivories, &c., of the Renaissance period lately purchased for the Louvre Museum, Paris, from Madame TIMBAL has just been arranged in the Salles de la Colonnade. The museum has also received a series of sketches by PAGNEST, the portrait-painter, and a fine bas-relief in stone by SARRAZIN, presented by M. FONQUIAU from the courtyard of his private house, the old Hôtel Effiat, in the Rue Vieille-du-Temple.

A SUM of nearly 11,000*l.* has now been subscribed for the establishment of the proposed art gallery and museum in Aberdeen. At a meeting of the general committee appointed by the subscribers, held in Aberdeen on Friday last week, the sub-committee proposed that out of this sum 5,000*l.* should be devoted to the erection of a building to accommodate the gallery and museum. This, it was urged, was quite a sufficient sum to expend on the building, the last ten or fifteen years having shown that art galleries need not be expensive buildings; and if a balance of 2,000*l.* or 3,000*l.* could be retained for future administration, a revenue of 120*l.* per annum would be obtainable.

As to the site of the art gallery some divergence of opinion appears to exist. At a meeting of gentlemen interested in the project, held the previous day, a site in Castle Street was advocated, it being thought that, in the event of the suggestion being agreed to, a number of improvements would be made in the property in the neighbourhood, and that thereby the rates of the city would be materially benefited. It was in consequence resolved to request the general committee to defer deciding on a site till more definite information could be obtained. The latter body, however, approved of the recommendation of their sub-committee, advising the grounds of Gordon's College to be taken in preference to the Castle Street site, the cost of the land per square yard being 10*l.* per annum in the former locality, as against 2*s.* 3*d.* in the latter. This was eventually decided on, though one gentleman expressed his opinion that it was tantamount to putting a wet blanket on the whole scheme, and protested that the question should not be settled offhand for the whole 100,000 inhabitants of Aberdeen, and without giving the public an opportunity of expressing their opinion.

THE passing of the Ancient Monuments Bill will be received with satisfaction by the archæological world and the public at large—with satisfaction, as it will, it is to be hoped, prove an efficacious power to safeguard whatever of interest we still possess of ancient days from wanton destruction and from mischievous mutilation. There will be no danger of the rights of property and private ownership being affected, as opponents of the measure were wont to insist, and in many cases landlords will be glad to have the benefit of that supervision which they are unable, or do not care, to exercise themselves.

THE solution of the Paris gas question, alluded to last week, has been put off for the present. M. FLOQUET, Prefect of the Seine, seeing that his project of an arrangement with the company had no chance of passing the Municipal Council—which, on the contrary, showed itself eager to begin a struggle, with the object of putting down the pretensions of the monopolist body—at a late meeting of the Council asked and received permission to withdraw his Bill; at the same time undertaking carefully to study the question during the recess, with the view of finding a means of compromise.

THE Scottish Arboricultural Society made an excursion last week, by permission of the Duke of ARGYLL, to the Rose-neath woods. Among other matters of arboricultural interest the yew tree avenue, a favourite walk of the late Dean STANLEY in his visits to Roseneath, was inspected. It consists of some forty aged yew trees, backed by two noble rows of limes and Spanish chestnuts respectively, while at its entrance stands a fine sycamore 120 feet in height, the bole of which, over 18 feet, measures more than 13 feet in girth at a height of 5 feet from the ground. The two silver firs named after our first parents "Adam" and "Eve," and said to be the finest in the kingdom, were also inspected. These trees are nearly 200 years old, and are mentioned by STRUTT in "*Silva Scottica*," the cubic contents of both being not less than 2,500 feet. The tree known as Eve, when measured in 1817 at five feet from the base, had a girth of 15 feet 9 inches, 19 feet 8 inches at one foot from the ground, and 17 feet 7 inches at three feet. In 1833 the measures of the girth were respectively 17 feet 7 inches, 22 feet, and 18 feet 4 inches; in 1881, 21 feet 8 inches, 28 feet, and 22 feet 8 inches. The measures just taken by the party on occasion of their visit gave 21 feet 8 inches at five feet from the ground, 28 feet at one foot, and 22 feet 8 inches at three feet, the altitude being 124 feet. The second fir, named Adam, is mentioned by STRUTT as measuring in 1822, 22 feet 4 inches at one foot from the base, and 17 feet 5 inches at five feet. In 1833 the measurements were, at the root 24 feet 9 inches, and at five feet, 18 feet 2 inches, while the height is given as 115 feet, Eve being 10 feet less. The girths of Adam are now 28 feet 10 inches at one foot, at three feet, 23 feet 4 inches, and at five feet, 22 feet, the height being about 130 feet.

SEVERE punishment has just fallen upon the members of the Executive Committee that has organised the carpenters' strike in Paris. This body has denounced or proclaimed the workshops of Messrs. PATRICE, and brought pressure upon the hands therein employed to come out. Under Article 416 of the Penal Code, which a month ago the Senate refused to repeal, although its abrogation had been voted by the Chamber of Deputies, the eleven members of the Committee have been condemned to fifteen days' imprisonment, to each pay a fine of 24*l.* as damages to the firm, and to insert the judgment in three different papers designated by the complainants. The importance of this decision is manifest, as it brings all picketing under the ban of the law, and renders it practically impossible for the future.

THE Corporation of Southampton have lately been in communication with the Keeper of the Public Records, having written to ask the Commissioners to have an examination made of the various ancient muniments of the Corporation with a view of ascertaining whether the muniments were of sufficient public interest and importance to justify them in publishing an abstract in the reports of the Historical Commission or of classifying them for general reference. In response the Commissioners say that they would gladly undertake an examination, having every confidence that much would be gathered from the Corporation's records of interest to historians and antiquaries. They are not, however, in a position to enter upon the work at once, as they have on hand many examinations of a like character which will fully occupy them to the end of the present year. The matter will, however, be borne in mind when the Commissioners meet to decide on the examinations for next year, and thus it is probable no great delay will take place before the wishes of the Corporation are carried into effect.

Two municipal schools of technical design, the first of the kind that have been established under official auspices in Paris, are to be opened towards the beginning of next October. These establishments, which are registered as communal schools, will be devoted to affording superior instruction in drawing and modelling to apprentices and workmen who have mastered the general principles of design, &c., at the ordinary day schools, and are desirous of learning how to apply them usefully in their several industries. This is but the first in a series of measures that the municipal authorities have expressed their intention of undertaking with the purpose of furthering technical education.









INK PHOTO

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19<sup>th</sup> 1882.



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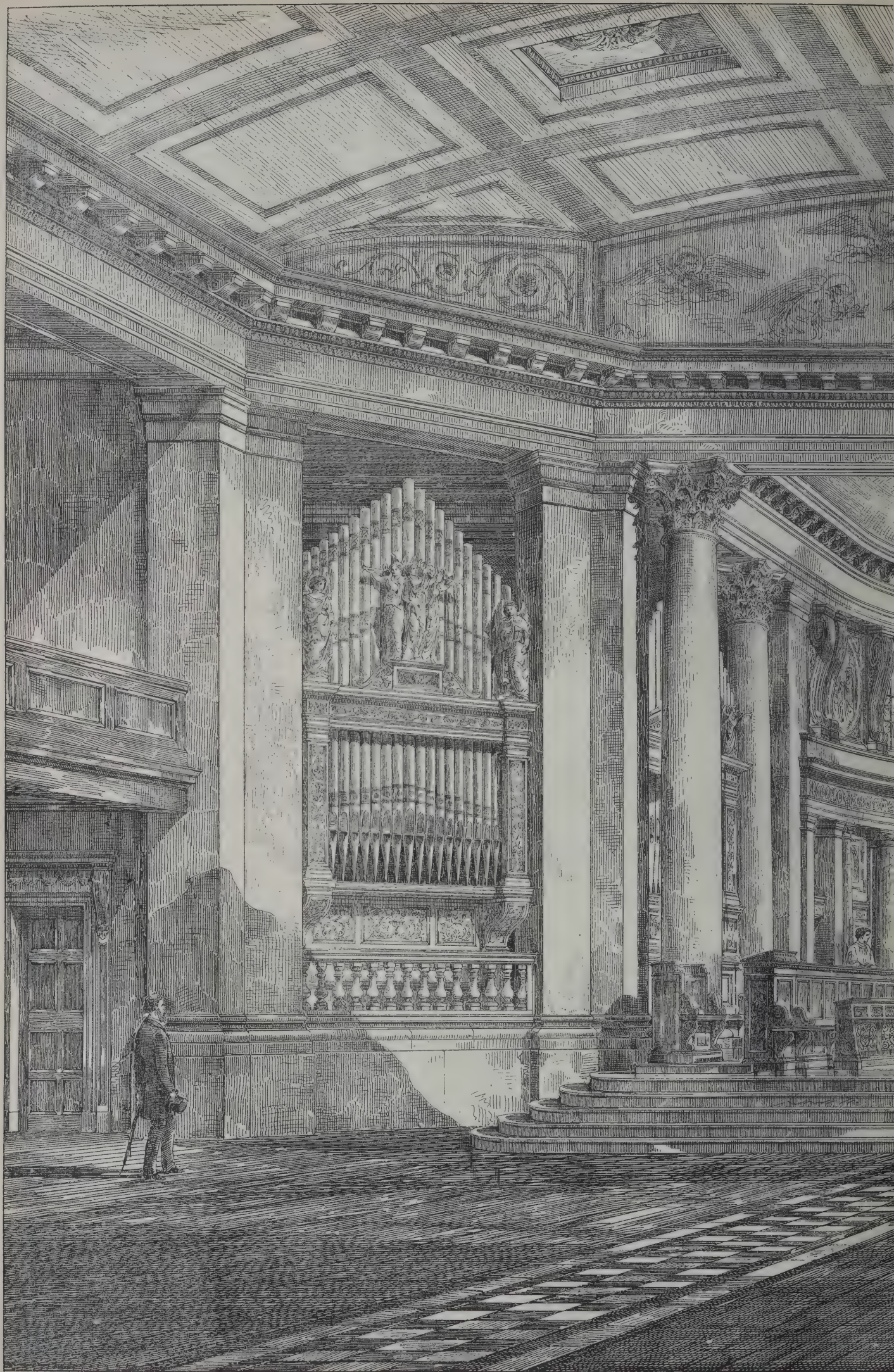












Church of S. Mary B.V. Balham.

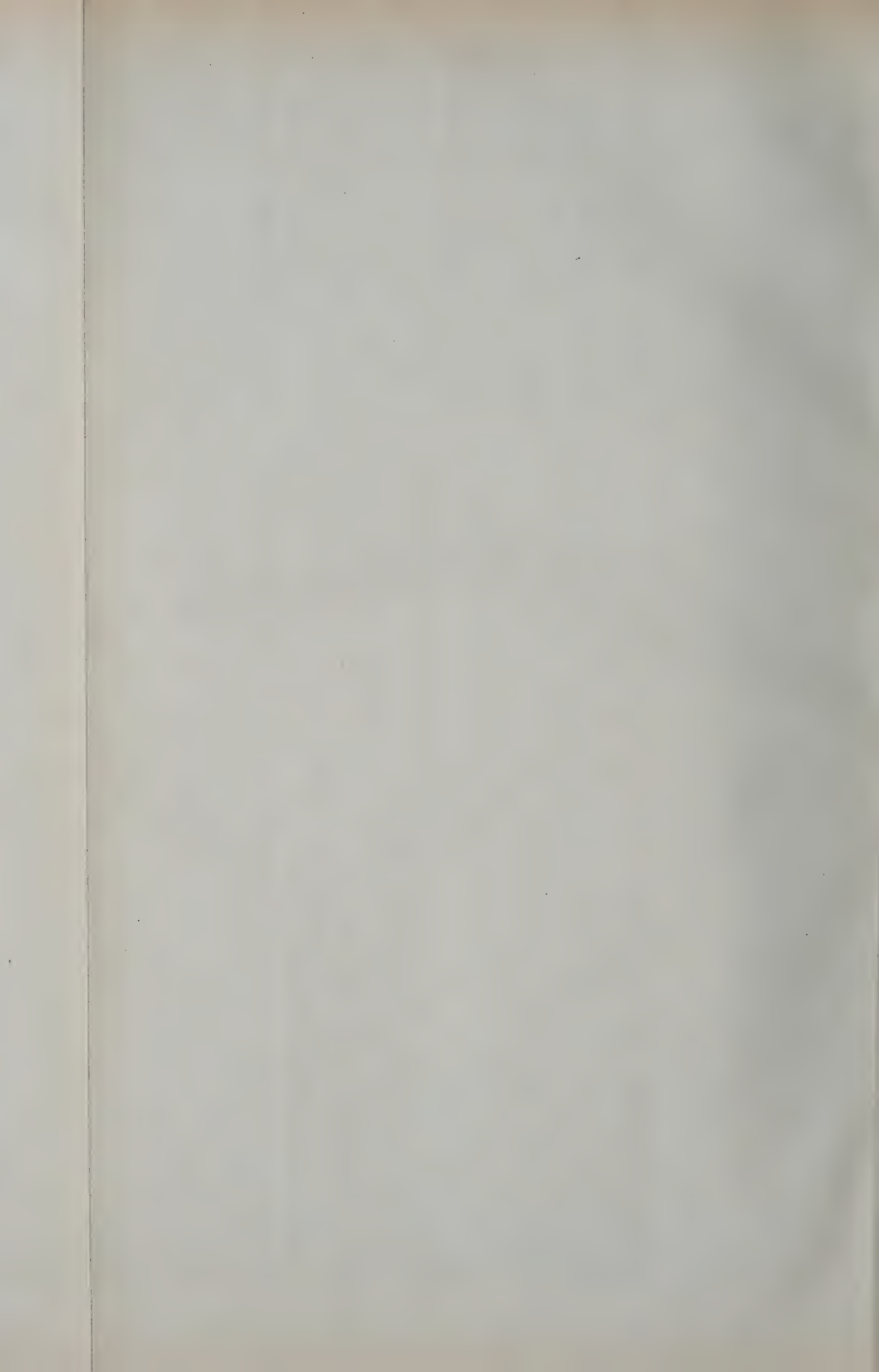




Proposed additions.

Arthur Cawston, Architect.







## ILLUSTRATIONS.

AGRICULTURE, DECORATIVE FRIEZE: CARPENTRY.

NEW CHANCEL TO THE CHURCH OF ST. MARY, B.V., BALHAM.

THE illustration shows the additions which are in progress in the Church of St. Mary, Balham, from the designs of Mr. ARTHUR CAWSTON, architect, of 11 Clement's Lane, E.C. The walling has just been completed, and it is hoped that the mural decorations and choir stalls will be speedily undertaken. The seven small windows are to be filled with stained glass by Messrs. CLAYTON & BELL, at the cost of a benefactor to the church. Another gift is the pulpit, which has been carved by Mr. FRAMPTON from designs by the architect. It has been the endeavour to have all the details of the additions in accordance with the style of the original structure, and to preserve an ecclesiastical character without having recourse to Romanesque or Venetian Gothic for inspiration, as is sometimes done.

At present, naturally, the walls look very bare and uninteresting, but the good proportion shows itself, and when completed we consider that it will show the proper classical treatment of a classic church, instead of the popular mixture of Romanesque and Italian-Gothic with a pure Greek example.

The works have been carried out by Messrs. BOWYER BROS., of Upper Norwood, from the designs of Mr. CAWSTON, who was chosen architect from among some dozen competitors about two years ago.

## THE ROYAL ARCHÆOLOGICAL INSTITUTE.

IN course of the excursions, Lanercost Priory was visited by the members of the Institute, and Mr. C. J. Ferguson, architect, of Carlisle, gave a short sketch of its history on the occasion. In the course of his remarks he called attention to the two figures in the upper part of the gable, stating that it was a question whether, standing as they did, they had been properly placed. The buildings consisted of a cruciform church with conventual buildings on the south side. The plan almost sufficed to tell its history. It was a priory of Austin canons similar to that of St. Mary at Carlisle. The church must have been at first a smaller building and without any aisle. Subsequently aisles were added and extensions made, except on the south side, there being on the south side the conventual buildings. The south part of the church was the earliest and of the Transitional period. It seemed that the intention of the builders was at first to erect extensive buildings, and that was carried out by degrees. They found the choir and eastern portion of the church and the south and west sides of the cloister were built later, and the church was gradually built westwards, increasing in richness and culminating in the beautiful front they had now. The earliest portion, the transitional work to which he had referred, was built of different stone from that of the cathedral at Carlisle, and here the Roman stones were palpably to be seen.

Mr. Micklethwaite said the key to the form of a church was almost always more easily got inside than outside. When they had once mastered how a church grew they could almost at once walk to the place where the earliest work was. This was a church of regular canons, like that at Carlisle, but it differed in one respect, which was characteristic of the order. Here they had a church with only one aisle. The explanation of this was that the regular canons always founded their churches where parish churches already existed. If they had not done that this church would not have been at present in existence as it was. When the canons built it, it was built on the parish church lines, though much larger than the parish church. The twelfth-century parish church was built in different forms. He would only speak of one of these forms. There was a church in the form of a cross, but without aisles. The canons built on the same model, or at least began to build so. They had a church without aisles and a transept without aisles; and when they had built that much, they would build a cloister and the buildings round it to live in. The next thing they built was the nave. By the time they got to rebuilding the nave—it was about one hundred years or more after the foundation—the ideas of aisles had grown; by the end of the twelfth century or the beginning of the thirteenth the larger parish churches began to have aisles, and the canons thought they must have aisles too, and they accordingly made such additions. The canons had certain rights here, notably the right of procession, and there were doors for the procession to go through; and they found a door from the cloister as they found it in every abbey church. A door built up opposite the present organ would bring the canons into the church; that did not serve their turn, and therefore they had another door, traces of which they would see, not far from the other, not going into the church, but into the canons' part. Proceeding to the chancel, now without the roof, Mr. Micklethwaite

said he would only call their attention to the way in which, having freed themselves from the difficulty in the position of the cloister, the canons went in for double aisles and symmetrical arrangement. He could not give a reason for the pillars being longer on one side than another. As they came into the chancel they came through a doorway rather Early English than transitional. There, he believed, was one of the doorways between the parish church and the collegiate church. On the other side they saw the door by which the canons came in. He pointed to a transitional door, which he thought probably entered a little sacristy, and close to it there was a patch in the wall which he thought was the way up to the old dormitory.

Mr. Tucker, after describing the coats of arms on the tombs, said that the tomb of Sir Thomas Dacre on the south was interesting, because, like Lord Crawford's the other day, it was violated. This was about 100 years ago, and the body was never recovered.

## Naworth Castle.

This castle was the next place visited, where also Mr. Ferguson made some observations. The new portion of the castle, which is not yet finished, was inspected with interest. It has been described as a new wing at the north side of the castle, carried out in red and white stone. It comprises four storeys above the basement. At the east end is the Stanley Tower, each floor of which contains spacious well-lighted rooms, and at the west end is the Watch Tower. Between the two towers are bedrooms and domestic offices. On the basement is constructed one of Hayden & Co.'s apparatus for heating the entire castle with hot water. The floors are fireproof. The wing has a double connection with the main building, one of which has been cut through the solid walls of the original building.

## Hexham Abbey.

The Abbey church was here visited, the party assembling in the Cloister Garth. Mr. C. C. Hodges described the features of the building:—He said the site on which they stood was one of great antiquity, and could be traced back with tolerable certainty to the time of Hadrian. He would not, however, dwell on the Roman period, but come down to the time of St. Wilfrid of Ripon, who built a Saxon Cathedral here about the year 674, the only trace of which now remaining was an ancient crypt, the church having been laid in ruins by the Danes in 875. About the beginning of the twelfth century, when a great many churches were built in the north of England, a church was built here by the Canons Austin of St. Augustine. The place had been an exceeding fine one, as was evidenced by the remains. The Abbey was in its palmy days in 1296, when the nave was destroyed by the Scots. It was on record that on April 8 of that year the men of Galloway came into Tynedale under the command of William Wallace, burning and destroying every church and monastery and gutting the town of Hexham, where they cruelly roasted to death 200 boys who were in school by locking the door and setting fire to the building. In 1311 Robert Bruce came here several times, and in 1346 King David of Scotland came to Hexham on his way to the battle of Neville's Cross. After visiting the site of the ancient nave, of which a few remains were exposed, the party perambulated the exterior of the church, and afterwards entered by the south door. In going round the interior, commenting on the restoration, Mr. Hodges remarked that he looked upon restoration as mischievous stupidity or downright wickedness. They might be thankful that the outside of the building at least was comparatively untouched, and that Canon Barker, the incumbent, was thoroughly conservative, and would not let a stone be unnecessarily displaced. The attention of the visitors was drawn, among other antiquities, to a large Roman slab, found in looking for a crypt supposed to exist under a portion of the church. The carving depicted a Roman standard-bearer on one of the small horses of the day, brandishing aloft his ensign and trampling under foot a Pict. The inscription was quite perfect, and indicated that the monument was to the memory of a Roman soldier who had served with the Roman legions for twenty-seven years. Two Roman altars were also inspected, and many of the party evinced great interest in the effigies of departed knights that were placed about in great profusion.

Before leaving the church, Mr. Peacock said he thought the party ought to express their indignation and disgust at the ignorance and ruffianism of the architect who had carried out the work of restoration. They had never seen anything half so revolting as what they had seen to-day, and he thought that, considering the amount of destruction wrought, they should not go away without expressing their strong feeling.

Mr. Tucker (Somerset Herald) made some remarks on the heraldic paintings that adorn the front of the woodwork of the vestry, and Baron de Cosson, pointing to an old and battered helmet suspended on a crook from the wall of the chapel, said it clearly dated from the end of the fifteenth century—probably 1480. He pointed out that it had no very remarkable features except a "reinforcing piece" over the forehead.—Mr. Hodges said the helmet was that of Sir John de Fenwick, who was killed at the battle of Marston Moor in 1644. His skull was preserved, and in it was an aperture which corresponded exactly with the hole in



the helmet.—Baron de Cosson said the helmets were often worn long after they were made, and this one clearly dated from 1460 to 1480.

#### Town Hall and Moot Hall.

Luncheon was taken at the modern town-hall, after which the party visited the old Moot Hall, now partly used as an ironmongery store. A number of the members ascended to the top of the tower and enjoyed a magnificent view, one of the chief points of interest in the landscape being the site of a British camp on Warden Hill. Mr. Hodges said the Moot Hall had been built about the year 1400, but by whom or for what purpose there were no records to show.

Excursions were also made to Abbotsford and Melrose and Dryburgh Abbeys.

#### Melrose Abbey.

Here a paper was read by Mr. Kerr descriptive of the history and architecture of the buildings. He said that the name indicated the original appearance of the locality, being composed of two Gaelic words, Mull and Rhoss, or Ross, signifying a bare promontory. The name was formerly spelled Mulross, now Melrose. The site was formed by the winding of the River Tweed through a narrow valley with rising grounds on either side. This locality had been distinguished from an early period, as it abounded in ancient remains of Roman buildings, ecclesiastical and baronial structures, cairns and tumuli indicating the site of feuds and more formidable conflicts. In drawing attention to the Abbey buildings he would remark that where they now stood was not the site of the original monastery of Melrose, which was situated at Old Melrose, nearly two miles further east. The site was still pointed out as the Chapelknowe, but not a vestige of the buildings remained. Some carved red stones were dug up there a few years ago, indicating that the more recent buildings were in the Norman style. In the earliest period Bede stated that the churches were all of oak and thatched with reeds. The old Abbey was supposed to have been founded towards the end of the sixth century and afterwards dedicated to St. Cuthbert, its third abbot. It continued to be recognised as an abbey till 1136, when the present one was founded; afterwards it was referred to as St. Cuthbert's Chapel. The early ecclesiastics in the middle of the twelfth century were merged into the Austin Canons, the order which they most resembled, and were afterwards only noticed occasionally until about the middle of the fourteenth century, when they finally disappeared. The present Abbey was considered to have been a new institution, founded by David I. in 1136. None of the buildings of the period, if they did exist, could be identified, and it was probable that they were not so extensive as the subsequent erection. The Abbey of 1136 was ten years in building, and according to the "Chronicle of Mailros," was dedicated to St. Mary in 1146. It was colonised by monks of the Cistercian order from Rievall, in the North Riding of Yorkshire, who were the first of the order introduced into Scotland, and continued as its head while it existed in this country. The "Chronicle of Mailros" was begun by the order establishment in 735 and continued down to 1270. The remains before them appeared to have belonged to buildings erected after the demolition of David I.'s structure in 1322. Between this date and 1510 the present abbey had arisen, which continued the Cistercian arrangement. There was one exception here to the general rule, by placing the garth or cloister court upon the north instead of the south side of the church. There were, however, examples of this deviation in England, as at Gloucester, Dore, and St. David's, &c. It had been remarked that it was difficult to trace the progress of the styles in Scotland, on account of the sudden transitions that existed occasionally in the same building, but this was readily accounted for, from the frequent destruction of these during the inroads from England. The church presented unity of interest throughout, and as religious teaching and education was committed to its care, it became necessary, even for the Church's existence, that her establishments should be placed in an efficient state as early as possible. The buildings were therefore restored according to the best examples, whether in style or arrangement. If the political situation of this country was such as to admit of architects or master masons being got from England, English features appeared; but if not, these were obtained from France. Thus they had in Melrose work of English character up to 1385, when the Abbey was partially destroyed by Richard II., and from this period until 1510 the work in some places showed indication of French features. The Abbey suffered many reverses, amongst the most prominent being its destruction in 1322 by Edward II. In 1385 it was burned by Richard II., and in 1545 it was literally destroyed, with the best of its outlying buildings, by the Earl of Hertford. To secure a portion of the nave to be used as a parish church the plain buttresses and sub-vaulting were introduced into other fittings in 1618, and continued in use till 1810. Behind the altar is the resting-place of the heart of King Robert the Bruce, which was placed there after being brought back from Andalusia in 1330. Upon the south side is the grave of Alexander II., upon the north the graves of the Douglasses—"the dark Knight of Liddesdale, and the hero of Otterburne." In the small chapel to the south of the altar is the grave of Sir Ralf Evers, and nearest the wall that of Sir Bryan Latoun (sometimes said to be that of

Michael Scott, the wizard), who were killed at the battle of Ancrum Moor in 1545. At the entrance to the cloisters is the burial-place of the house of Yair, and opposite to it are the graves of the Kerrs of Keppilaw.

Mr. Micklethwaite, pointing to the rich and elaborate carvings of various parts of the ruins, said it was an extraordinary place for the order of Cistercian canons, who in their churches aimed at being plain. He described the subsidiary buildings, and from the chancel pointed out the doorways in the transepts and aisles, and described the buildings into which they led. In the guide-books the positions of the nave and choir had been reversed. The choir was really on the other side of what was said to be it. In the exterior view of the east window there were two figures which were said to be those of David I. and his Queen Matilda. He did not think the figures were correctly described. His opinion was that the figures represented the crowning of the Virgin.

#### Dryburgh Abbey.

Mr. Kerr read a paper in the Cloister Court of the Abbey. He said the name Dryburgh was derived from the Celtic Daroch-Bruach, which signified the Oak Grove. A colony arrived here about 522 under a presbyter, whose name was Modan, and founded a settlement of Christian missionaries. The Abbey was founded by Hugh de Morville and his wife Beatrice Beauchamp, with the concurrence of David I. It was colonised from Alnwick by monks of the Premonstratensian Order, following chiefly agricultural and literary pursuits. The buildings were first occupied on St. Martin's Day 1141, and dedicated to St. Mary. In 1150 the cemetery of St. Martin was consecrated in order that "foul spirits might not walk therein;" and a second cemetery was added in 1208. Besides the abbey buildings there were remains of a corn mill and brew-house with some other ruins. The old graveyard was upon the north side of the church, and the site of the altar with that of the village upon the south-east side of it. The buildings of 1150 had been entirely demolished, as the existing ones did not appear to be later than the early part of the fourteenth century. In reckoning from the styles of Scotland it was found that they were about a century later than the corresponding periods in England. The architectural styles were more decidedly marked here than at Melrose. The remains of the buildings upon the east side of the cloister court were Transition Norman. The choir and north transept, and the gable of the south transept of the church were Early English, and the nave Early Decorated. It would also be noticed that the circular arch was retained in all the principal doorways and smaller openings. The abbey buildings being situated upon a slope, required a considerable extent of stairs to communicate with the various apartments. Sir Walter Scott was buried in St. Mary's aisle.

Mr. Micklethwaite said that though the place did not belong to the Cistercian order, it really gave a better idea of what a Cistercian place would be than the gorgeously-carved architecture of Melrose Abbey. It belonged to the order of canons, corresponding to the order of monks; they were Augustinian canons, and corresponded to the Benedictines in their way. He did not think they were so strict as the Cistercians, but they went in for perfectly plain buildings. He pointed out where the various buildings stood, and described the rooms into which the doorways before them in the cloister court led. From the passage, which would probably lead to the infirmary, there was a door to the left which led to one of the most interesting rooms of the place, a very good example of the common room. The people did not warm the place with hot water in these days, but they had a large fire in winter in this common room, to which the canons had access, and where when they were cold, which they did not seem to care much about, they went and warmed themselves. This seemed to have been altered in later days. In an arch behind them were the remains of the lavatory, in which the canons washed themselves before going into the frater, the site of which was on their right. The building near them was called the Cellarium, and it was now in a very ruinous condition. In the lower part there must have been storehouses; he did not think there were any dungeons. The prisons for the offenders of their own order were always in the infirmary. He advised them to go and see the common room and the chapter-house. The latter was very perfect indeed. They would see the benches all round, with the rather superior bench for the big man.

The proceedings were closed by a meeting held in the assembly rooms of the County Hotel, presided over by the Bishop of Carlisle.

The temporary loan museum organised on occasion of the Congress contained a good collection of implements of the Stone Age, British urns, Celtic weapons and ornaments, including a gold torque found in Carlisle; Roman bronzes, brooches, and sandals; old books and manuscripts, and among these the magnificently-illuminated altar missal formerly belonging to Calbeck Church, now in the possession of the Roman Catholic chapel at Warwick Bridge. The walls were hung with portraits and other historical pictures from Muncaster Castle, Greystoke, and other private collections, among which were several portraits of Mary Queen of Scots; one of Skelton, the famous "Fool of Muncaster," in his motley garb; a portrait of Erasmus, by Holbein; and a head of St. Thomas of Canterbury, by Van Eyck, cut out of a larger picture



at the time when all memorials of St. Thomas were destroyed. The collection of ancient church plate from all parts of the diocese included a lovely fifteenth-century chalice from Old Hutton, that bequeathed to St. Bees by Archbishop Grindal, and some curious little beakers without a stem or foot. A collection of gems from the Greek and Roman sites of Dalmatia and the east coast of the Adriatic was lent by Mr. Arthur Evans. Among the Greek gems are a faun holding an amphora, a passant lion, and Dædalus presenting Icarus with wings. The Roman series contains examples of portraiture, notably a carnelian head of Antoninus Pius. A remarkable intaglio represents the personification of the city of Salona. There were also a few Christian designs. On one the Good Shepherd is seen opposite an amphora symbolising the waterpots of Cana, with the Christian monogram above. Another shows St. Veronica holding the icon, and a large amethyst from Ravenna bears a full-length portrait of Christ.

### THE NATIONAL PORTRAIT GALLERY.

THE 25th annual report of the trustees of this gallery was issued on Wednesday. The total number of visitors during 1881 was, according to the report, 84,533, being 8,423 in excess of the number of the year before. The number of visitors on the Bank Holiday, August 1, 1881, was 3,037, against 2,206 of the previous August. On Boxing Day, December 26, 1881, the visitors numbered 1,619, against 1,690 of the year before. The number of visitors on Easter Monday 1882 amounted to 2,851 against 3,584 of the previous year. On Whitsun Monday in the present year the number of visitors was 2,388, against 3,528 of last year. The number of visitors during the first six months of the present year was 39,200. The number of visitors to the Gallery, from the commencement in Great George Street, Westminster, to the end of last year, was 1,053,103 and the total number of visitors during the last ten years, 749,046. The donations during the year have been as follows:—William Page Wood, Lord Hatherley, painted by George Richmond, R.A.; H.R.H. Edward, Duke of Kent, K.G., by Sir William Beechey, R.A.; H.R.H. Frederick, Duke of Sussex, K.G., by Guy Head; John Rennie, F.R.S. (a bust sculptured in marble), by Sir Francis Chantrey, R.A.; Margaret Woffington, painted by Arthur Pond; Dominic Serres, R.A. (a small sketch on paper, or full-length figure washed upon in sepia and Indian ink); Earl of Beaconsfield, K.G. (small-sized full-length bronzed figure); George Berkeley, Bishop of Cloyne, painted by John Smibert; Sir Francis Chantrey, R.A. (in black and white chalk); heads drawn in outline by Sir Francis Chantrey, R.A., being a series of 100 portraits of celebrated persons drawn from the life. They are executed by means of the *camera lucida*, on large sheets of paper, in lead pencil, some shaded, and mostly of the size of nature; Thomas Carlyle (terra cotta bust), by J. E. Boehm, R.A.; William Hayley (bust); James Watt, painted by Henry Howard, afterwards R.A.; and George Legge, first Lord Dartmouth, painted by Michael Dahl. The purchases comprise the following: Richard Brinsley Sheridan, signed "J. Russell, pinxt., 1788;" Edmund Burke; Nathaniel, Bishop of Durham, painted by John Riley; John King, Bishop of London, by Daniel Mytens; Abraham Cowley, the painter of this is uncertain, as also of John Whitgift; and Sir James Outram, by Thomas Brigstocke.

Two pictures, it appears, were purchased on July 8, 1882, from the Hamilton Palace collection, *King James II.*, painted by Sir Godfrey Kneller, and *Ratification of the Treaty for Peace and Commerce between England and Spain*—a large historical picture representing the English, Spanish, and Austrian plenipotentiaries assembled in an apartment at old Somerset House, August 18, 1604, to conclude a treaty of peace and commerce between the Kings of Great Britain and Spain and the Archdukes of Austria—(James I., Philip III., Albert, brother of the Emperor Rudolf, and Isabella Clara Eugenia, sister of the King of Spain). The names are inscribed on the lower part of the picture in Spanish in two columns, with corresponding numbers and letters near the heads. Those on the left, being foreigners, are distinguished by numerals. Those on the right, the English, are identified by capital letters. Below, on the left, in a deep yellow colour, is written "Juan pantoja dela x f. 1594." There can be little doubt that the name of the artist and date have been subsequently added, although at a remote period. In the year 1594 there was no historical conference, and the titles by which the English nobles are designated in the writing on the picture were not conferred till some time afterwards. The method of painting does not correspond with the known works of Pantoja de la Cruz, who never visited England. He died in 1609. The picture may with probability be assigned to Marc Gheeraedts, who arrived in England from Bruges 1580, and was much employed at court. A small and highly-finished portrait of Queen Elizabeth, standing, with a sprig of olive in her hand, and the sword of justice at her feet, painted by Marc Gheeraedts, signed M.G., is in the possession of the Duke of Portland. His portrait of Camden in the Bodleian Gallery at Oxford is signed in full. Excellent pictures inscribed with his name

are at Woburn Abbey, Barrow Green, Surrey, and Penshurst Place in Kent.

The trustees record the successful completion of the alterations in the upper long gallery specified in their previous report as about to be commenced by her Majesty's Office of Works. The skylights inserted in the sloping roof to the north and south are at a very favourable angle for concentrating light where most required. The screens projecting from the north wall have been heightened and connected with the beams of the ceiling so as to strengthen the construction of the building. They have also been perforated with doorways in order to facilitate the circulation of visitors at holiday times. The walls have been painted in distemper colours to correspond with the rest. It is, however, to be feared that the heterogeneous character of the grouping of pictures and sculptures on the ground floor, more particularly round the eastern staircase, adverted to in the concluding paragraph of last year's report, must be allowed to remain some time longer. The portraits in question have been temporarily displaced from the upper long gallery during the period of alterations. Although the structural improvements are now completed, the replacing the portraits and electro-types, and re-hanging pictures on the newly-gained extent of wall, will be a very costly undertaking, and such funds as might be available for that purpose may now be urgently required to meet the unexpectedly heavy demand for recent purchases at the Hamilton Palace sale. The trustees have to acknowledge the readiness with which the Government have acceded to their request that special facilities might be granted to them for availing themselves of the opportunity of making valuable additions to the gallery from the Hamilton collection. These demands have proved to be in excess of what was originally anticipated. The high price which the trustees have thought it necessary to pay for the conference picture rather than allow it to pass into foreign or other hands, have more than exhausted the funds specially placed at their disposal, which expenditure will have to be met by saving under different heads in subsequent years.

The trustees state in conclusion that they believe that the interest felt in the gallery by the public is in no way diminished, and that the advantages which all classes have derived from the study of the national portraits have more than realised the expectations of those who originated the establishment of the institution.

### THE INSTITUTION OF MECHANICAL ENGINEERS.

THIS Institution opened its summer meeting on Tuesday morning at Leeds. An address was given on the occasion by the president, Mr. Percy G. B. Westmacott, in the course of which he said:—It is desirable there should be from time to time a general survey of progress—some stocktaking, in fact, of work done—some guidance, help, or advice to younger members of the profession—some forecast of the direction in which investigations or improvements or inventions should be pressed—some expression of thought, or reflection, to raise the mind to the higher attributes and duties of our profession; and it is to the chair of our institution that we may very fairly look for the accomplishment of this portion of the work. About this time last year we received from our past-president, Mr. Cowper, a most admirable and concise summary of the recent progress of engineering and scientific inventions; and shortly afterwards, at the meeting of the British Association, another of our past-presidents, Sir Frederick Bramwell, shook down with all his power and generous energy the ripe fruits of his knowledge and experience in engineering and scientific matters during the progress of the past half-century. I shall not attempt to traverse the same ground. Even if I had the power or experience to do so, it must be confessed that this last year has been unusually barren in mechanical inventions; but at the same time many scientific and mechanical appliances are being projected and pressed forwards into use, for the benefit and, let us hope, for the peace of mankind. Reflecting then upon the results of the great and rapid progress in practical science and art that has taken place of late years, there is, it appears to me, a point of significant interest to engineers, and it is this—that the nation or community which applies its inventive faculties, its powers of adaptation and construction, to the moving of materials for useful purposes with the least amount of manual labour and waste—in a word, which extends and cheapens transport by land and by water—is in the van of all real work, substantial progress, wealth, and civilisation. It requires no statistics to prove this—no toy calculations, having for their base some popular formulæ such as the measure of a belt round the earth, or the distance from earth to moon, to call forth comparisons. We have but to glance back at a man in his savage state, living with earth's latent riches around him, and yet incapable of moving these rich materials for his benefit, without the guidance of some higher intellectual and cultivated power. We have but to contemplate the marvellous and gigantic structures of the East, which were erected, at an enormous waste of manual power, for no good or useful purpose to mankind, and thus stand as monuments of man's pride and self-glorification. There was no power of real and bene-



ficent progress in these—no real work. How do we in this country stand in this respect? We may reverse the medal: we have availed ourselves of the natural resources of our land; we have made progress and done good work; but, in all humility we must own, the results of our work and progress have been greatly tarnished and impeded by the savage waste and selfish spoliation of the good things we have moved and lived upon for our benefit. We may pride and plume ourselves upon the vast strides which science, art, and engineering have made in our time; but posterity will assuredly lay its finger upon the great blot of waste, and may stigmatise our age as the Black Age, which has spoilt—by careless, unnecessary, and selfish emissions of smoke and noxious gases—many a noble town and many a lovely spot on earth. The smoke nuisance is altogether inexcusable, and cannot be too severely dealt with. Science and art have practically overcome it; and experience enables many, like myself, to assert that money can be profitably laid out and yield good interest in the abatement of this unpardonable nuisance. Then with regard to waste, much ingenuity and skill have certainly been displayed, and much work has already been done to lessen this evil; and the records of our institution will bear witness that many of our members have striven and succeeded well in their efforts to remove this stigma from our age. I would urge upon the younger members of our profession to study this question profoundly, and as if the whole of their success in life depended upon it; and never to undertake the smallest piece of work without wrapping it round with economy. Those who carry out this advice will assuredly succeed.

A paper was then read by the secretary, Mr. A. H. M. Thompson, of Leeds, on "The History of Engineering in Leeds." In the course of his paper Mr. Thompson said that mechanical engineering appeared to have made but little progress prior to the commencement of the present century. The necessary machinery in the district, whether the motive power was wind or water, was of a very simple character; and the appliances for colliery working, or for the smelting and working of iron, were of a very primitive description. It was about a hundred years ago that improvements in the steam-engine gave an impetus to mechanical engineering throughout the country; and the genius of Matthew Murray soon enabled the Leeds district to take a prominent place in this industry. Having introduced various improvements in machinery, engine building soon became a large branch of his manufacture. Two engines of his make, one of fifty, the other of sixteen horsepower, are still driving machinery at Messrs. Titley, Tatham & Walker's, Water Hall Mills, Holbeck. For one of his engines, sent to Russia, he received a gold medal from the Emperor. So rapidly did his business progress in the North of England, that James Watt found him a formidable rival—so formidable, indeed, that the firm of Boulton & Watt bought up the land round his works to prevent their extension. In 1812, in conjunction with Blenkinsopp, Murray brought out what was undoubtedly the first locomotive engine ever successfully employed for commercial purposes. It was constructed for the conveyance of coal from the Middleton Colliery to Leeds, a distance of about  $3\frac{1}{2}$  miles, and was capable of dragging thirty loaded coal waggons at a speed of between three and four miles an hour. It continued to run for many years. Murray's works were the school in which numbers of engineers of note in the early part of the present century were educated, many of whom started works in Leeds and elsewhere.

On Wednesday, among other papers read was one by Mr. T. R. Crampton on his automatic hydraulic system for excavating the Channel Tunnel. He said this was one of the most prominent engineering problems of the day. His system was founded upon the employment of hydraulic power for driving all the machinery necessary to cut down to the chalk at the tunnel face, and to remove the *débris* out of the tunnel to the surface through pipes to any place where it could be disposed of. He treated the question on the assumption that the whole length of ten miles was executed at a level of 400 feet below the level of the sea, and that the arrangements were such as that the work of excavation and the removal of the *débris* had all to be carried ten miles from the starting-point. A minute explanation was given of the powerful machinery to pump water from the sea; of inlet pipes conducting water under high pressure as a means of driving the cutting machinery, and of the various modes of dealing with the cream or sludge arising from the *débris* or chalk. It was shown how the space lying between the boring machinery and up to the top of the shaft was left entirely free, excepting so small a portion of it as was occupied by the high-pressure water inlet-pipe, and the cream outlet-pipe. After going into details regarding the powers required by the various operations, the size of the inlet and outlet pipes, and other data in connection with hydraulic machinery, Mr. Crampton explained in which way his system afforded facilities for the speedy lining of the tunnel, and a great saving of time and expense. For the men who might hereafter be employed at the boring machinery he proposed to carry sufficient air under compression with the water, which being discharged at certain motors, would keep that part of the tunnel cool and well ventilated. He said for the comparatively slight traffic which would be necessary to carry in the men and materials air locomotives would be employed, and the discharge of air from their motors would ventilate all the space occupied by men working on the lining, and at all events the quantities of air

required for ventilating purposes would be inconsiderable, and a very small pipe would supply them. In conclusion, he observed that the power required by the hydraulic system would not amount to one-third of that required when the chalk was cut in a dry state by compressed-air machinery, and had to be conveyed by air locomotives in trucks, and lifted to the surface by the ordinary means.

## THE DUBLIN EXHIBITION.

THE Dublin Exhibition was opened on Tuesday, and at the same time the unveiling of the O'Connell statue took place at Carlisle Bridge, which in future is to be known as O'Connell Bridge. The statue, which was left unfinished by Foley, has been carried on by Mr. Brock. The structure stands 40 feet high, and consist of three distinct parts. Surmounting all is the figure of the Liberator, 12 feet in height, representing him enveloped in his historic cloak. Next comes the cylindrical drum, bearing fifty allegorical figures in high relief. Of these the principal is Erin, 8 feet high, trampling her cast-off fetters under foot, while with one hand she grasps the Act of Emancipation, and with the other points up to her Emancipator. The other figures are symbolic of the Church, the Professions, the Fine Arts, the Trades, and the Peasantry. Then the third part is the base itself, formed of two gradients. The four winged Victories, which are to project from the corners, are unfortunately absent, owing to the incompleteness of the casting of one. The Victory of Patriotism has seized a sword in her right hand, and bears a shield in her left; the Victory of Fidelity holds a mariner's compass and caresses a dog—both types of constancy; the Victory of Eloquence, with a look all fire and life, clasps a roll of documents; and the Victory of Courage is in the act of strangling a serpent as she grasps a bundle of reeds, typical of the doctrine, union makes strength.

The Exhibition building is situate in the Rotunda Gardens. It is well designed and laid out picturesquely, though with a view to the utmost economy of space. It covers an area of 33,000 square yards, or about two acres and a quarter. The structure is of wood and glass, with corrugated iron for a portion of the walls and roofing. The amount of material used in the construction includes 25,000 feet of scantlings, 35,000 feet of slating and corrugated iron, 26 tons of iron, and 9,000 feet of canvased roofing. As no contractor could be found who would undertake the construction at the estimated outlay or within the time specified, the directors themselves undertook the work, which has been carried out from the plans of Mr. G. C. Ashlin, A.R.H.A. The Agricultural Hall is entirely detached, and situated close to the railings at the north side of the square. The Art Gallery is also a separate house, but connected with the gallery at the north-east side by a passage which runs parallel with the Machinery Department. The latter runs at right angles, and upon the same level with the Central Hall. The chief entrance is at the Cavendish Row side; but there are other doors, one by the Rotunda and one in the south-east corner. The main building or central hall is 250 feet long by 100 feet wide. It is roofed in three spans, the centre span being 50 feet and the two others 25 feet each. There is an apsidal projection in the centre of the east façade 100 feet wide and 50 feet deep, in front of which the main entrance porch is situated. This porch enters on a level half-way between that of the ground-floor and that of the gallery, which runs all around this section of the building. The galleries occupy the side span of the main hall and apse, and are 25 feet wide, the height above the ground-floor being 15 feet, leaving the centre bay of the building open to the roof—a clear height of 53 feet. The Art Gallery is entered by a large passage from the gallery at the north-west side of the main hall. It is 137 feet long by 32 feet wide and 30 feet high. It is lighted entirely from the roof, and has an apsidal projection at one end. The machinery annexe is 150 feet by 100. It is roofed in four bays, each 25 feet wide, divided by rows of columns, brackets being provided on each bay of the shafting which drives the machinery. The roofs are of iron, with a large glass lantern in each space about 30 feet from the ground-floor. The roofs—except in the Art Gallery—are supported on arched lattice ribs of light construction, those in the nave roof being double, with cross lattice work between; and the roof of the Art Gallery has framed principals, having collars and king-posts with moulded ends. The ceiling here is caved on each side, and has a large roof-light in the centre extending the whole length, and being the only light required. The decorations are all in distemper colour in various tints, and the main uprights, gallery front, &c., are decorated with stencil pattern of various appropriate designs. The tints in the main hall are—uprights, brown, buff, and light blue; clerestory framing, white; and gallery front and roof trusses in red, bluish grey, and yellow, the remaining roof timbers being white Xisler; uprights, &c., to correspond with the main hall and roof, in tints of bluish grey and salmon colour. The refreshment-rooms at the north side have boarded ceilings decorated with stencil ornaments, and open out the verandah. The Art Gallery has been decorated in a quiet tone, the walls a light chocolate and the ceiling a light blue, the roof and cornice being buff. The exhibits are numerous, and chiefly of an industrial character. Many are of the highest class. The machinery department is well filled, and contains specimens of



Dublin manufacturers' design and work. Every important Dublin firm is represented, and there is scarcely any industry established, at all events in the midland and southern districts of the country, that is not amply illustrated.

Various schools of art are represented in the Picture Gallery, and the works of known living Irish painters are abundantly illustrated. Besides foreign canvases there are works also by Sir Joshua Reynolds, Sir Thomas Lawrence, Creegan, Hamilton, M<sup>r</sup> Manus, MacLise, Edwin Hayes, Smith, Sharpe, Nichol, Watkins, Duffy, Shiel, Gray, and Marquis. In addition to special contributions of pictures in the possession of private families, there are many works by the younger Irish artists. On the wall facing the entrance are hung almost exclusively paintings by Irish artists. Facing them are hung in sections works of the foreign schools and portraits by the great English masters; and at one end of the room is suspended the great painting by John Fergus O'Hea, *Punchestown*, 1868. Along the centre of the room stand the marble sculpture and casts by Foley, Hogan, and the Farrells.

#### BRITISH ARCHÆOLOGICAL ASSOCIATION.

THE thirty-ninth annual congress of the Association will take place at Plymouth on Monday, the 21st inst., terminating on Saturday, the 26th. There will be three extra days, however, for the purpose of paying a second visit to Cornwall, beginning on Monday, the 28th, at Liskeard, and ending there on Wednesday, August 30.

The Duke of Somerset, Lord-Lieutenant of Devon, has accepted the office of president, and the following sketch of the proposed programme of excursions, &c., has been arranged:—

Monday, August 21.—Reception by the Mayor and Corporation in the Guildhall, and delivery of the inaugural address by the Duke of Somerset, K.G., President of the Congress. Visits afterwards to be made to the churches, old buildings, and antiquities of Plymouth, under the guidance of Mr. R. N. Worth, F.G.S.

Tuesday, August 22.—Visits will take place to Buckland Church and Abbey, which will be commented on by Mr. E. P. Loftus Brock, F.S.A., and others; thence by Devil's Bridge to Princetown, the Cyclopean Bridge at Blackbrook, the pre-historic remains near Merivale Bridge, consisting of hut-circles, avenues, menhir, sacred circle, and to Tavistock. Evening meeting at the Athenæum, Plymouth, for the reading and discussion of papers, &c.

Wednesday, August 23.—A visit will be made to Totnes, where the party will be received by the Mayor and Corporation, and then proceed to visit the castle, after which the party will proceed by the river steamer down the Dart for Dartmouth, and inspect the church of St. Saviour, its carved stone pulpit and celebrated carved wood screen; then to Butter Walk for examination of curious old houses there. Evening meeting at the Athenæum at Plymouth.

Thursday, August 24.—A visit will be made by Tavistock over Black Down, by Mary Tavy to Lydford, for inspection of remains of castle, the church and, curious tombstone in churchyard, also the ancient earthwork, which will be commented on by R. N. Worth, F.G.S. Afterwards by way of Brent Tor, with its Church of St. Michael; thence by Kilworthy House, formerly the seat of the Glanvilles, to Tavistock, where the church, the refectory, Betsy Grimbal's Tower, and other remains of the Abbey, as well as the Ogham and other inscribed stones in the vicarage gardens will be inspected. Evening meeting at the Athenæum.

Friday, August 25.—By Totnes to Berry Pomeroy Church, mansion, and castle, and remains of Tudor House, all of which will be commented on and described; Compton Castle, and thence to Torquay. Tor Abbey will be examined and commented on by Mr. E. P. Loftus Brock, F.S.A., Mr. George Patrick, and others. Evening meeting at the Athenæum.

Saturday, August 26.—Slade Hall and drive by Cornwood and Harford to Fardell, formerly the seat of the Raleighs; and thence to Ivybridge, returning by way of Plympton, for the examination of the churches of St. Mary and St. Maurice, the remains of the priory and castle, &c., under the guidance of Mr. J. Brooking Rowe, F.S.S. Closing meeting at the Guildhall, Plymouth.

The following gentlemen have promised papers for the Congress:—Mr. C. Spence Bate, F.R.S.; Mr. E. G. Bennett, on "Robert Blake, 1656"; Mr. T. R. A. Briggs, F.L.S.; Mr. Walter de Gray Birch, F.S.A., on the "County Seals"; Mr. E. P. Loftus Brock, F.S.A., on "The Peculiarities of the Churches of Devonshire, St. Germans," &c.; Mr. William H. Cope, on "Old Plymouth China"; Mr. C. W. Dymond, F.S.A., on "The Hurlers, Trethevy Stone, and Duloe Stone Circle"; Mr. James Hine, F.R.I.B.A.; Mr. Thomas Morgan, F.S.A.; Sir James A. Picton, F.S.A., "Glimpses of Municipal Life in the Olden Times"; Mr. J. Brooking Rowe, F.S.A., on "Plympton Castle and Churches," &c.; Rev. J. Erskine Risk, M.A.; Rev. W. S. Lach-Szyrma, M.A.; Mr. John Reynolds; Mr. R. N. Worth, F.G.S., president of the Plymouth Institution, on "The Antiquity and Antiquities of Plymouth," and on "The Plymouth Municipal Records"; Mr. George R. Wright, F.S.A., "Fardell, the Family Seat of the Raleighs"; Mr. Francis Brent, "On a Group of Prehistoric Remains on Dartmoor hitherto undescribed," &c.

#### LONDON THEATRES.

AT the last meeting of the members of the Metropolitan Board of Works prior to the usual autumn vacation, held on Friday last week, a sum of 150*l*. was allowed by the Board to meet the extra expenses incurred by the officers and men of the Fire Brigade who were employed under the chief officer in the work of inspecting the London theatres. The Building Act Committee reported that in their opinion it would not be practicable to make any general regulations under the provisions of the 45th section of the Metropolitan Board of Works (Various Powers) Act, 1882, authorising the Board to require the means of exit from theatres to be kept open. The Committee, however, recommended that a reference be made to them, instructing them to frame and submit to the Board from time to time, for approval and adoption, special rules with respect to the times during which, and the conditions under which, the doors of each of the theatres and music-halls of the metropolis should be kept open, the persons to be charged with the duty of closing and opening the same, the nature of the fastening of such doors, and the notices to be posted in each building specifying the means of exit.

With reference to the application of Mr. T. Verity, on behalf of Miss K. Santley, for a certificate by the Board, as required by the Metropolis Management and Building Act Amendment Act, 1878, in respect of the reconstruction of the Royalty Theatre in Dean Street, Soho, the Building Act Committee recommended that the applicant should be informed that the plans did not comply with the Board's regulations, and that therefore the Board were unable to grant the application; and that the applicant should be also informed that, unless the site were improved, the Board would feel it necessary to advise the Lord Chamberlain not to issue his licence in respect of any theatre that might be erected thereon.

The several recommendations of the Committee were adopted.

#### MR. WARWICK BROOKES.

THE death is announced of Mr. Warwick Brookes, of Manchester, on Friday evening, the 11th inst., at his residence, Egerton Grove, Stretford New Road, in the seventy-third year of his age.

In the death of Mr. Brookes we believe (says the *Manchester Guardian*) we are not in the least exaggerating when we say that Manchester has lost one of the most distinguished draughtsmen and one of the most accurate and delicate limners of the human form and face she has ever produced. In artistic circles we have every reason to believe that this opinion will be generally endorsed. Mr. Brookes was born in the neighbourhood of Birtle's Square, Salford, about 1809. At a very early age he was employed in the then well-known Broughton printworks of Messrs. John Barge & Co., to which firm he was subsequently apprenticed as a pattern-designer. After serving his apprenticeship, and being some time in the employ of Messrs. Barge, he was engaged for a short period by another firm of calico-printers, ultimately entering into the service of the Rossendale Printing Company, with which firm he continued until some few years ago, when the weak state of his health incapacitated him for the prosecution of his ordinary business. At an early age, however, he imbibed a taste for drawing which developed itself in a marked degree during the remainder of his life. One of the first men to recognise his genius in his drawings of the human figure was the late B. R. Haydon, who, upon his first visit to Manchester, saw the works of the young pattern-designer, and commended them in the highest terms. Among the earliest work which Mr. Brookes exhibited was at the Royal Institution in 1849, to which he sent a series of exquisite sketches illustrating the "Journal of a Poor Vicar." In 1850 he sent two capital examples, *The Mendicants* and *Street Music*. He was subsequently an occasional exhibitor at the autumn exhibition of the Royal Institution, but never sent more than one or two examples to each exhibition. His sparseness in quantity, however, was more than redeemed by his undoubted richness in quality. His sketches and studies, especially of children, were always eagerly sought for on our Institution walls alike by the admiring connoisseur and critical artist. Some of his sketches of children, we believe, were purchased by the Queen. The little old man was shy and retiring to a degree, and never seemed to care to court popular applause by the works he exhibited. When urged to produce larger and more pretentious work, he would calmly reply that he was perfectly satisfied with the scope of his genius. In 1868 he was elected a member of the Manchester Academy of Fine Arts, of which he continued a member until last year, when he resigned. To the spring exhibition of the Manchester Academy he generally contributed one or two of his exquisite drawings. Owing to his incapacity through sickness for either following his business as a pattern-designer, or in the close prosecution of his profession as an artist, representations were made, mainly at the instance of Dr. Samuel Crompton, to Mr. Gladstone that Mr. Brookes was fairly entitled to a pension from the Civil List. The Premier was thoroughly satisfied with the claims of the old artist, and recommended her Majesty to grant him a pension of 100*l*. per annum.



which was made on April 24, 1871, "in consideration of his talent as an artist." In private life and among his artist friends Mr. Brookes was greatly admired, not only for his high ability as an artist, but also for his kind disposition and readiness to impart his own long and valuable artistic experiences to all who sought his counsel and advice.

### CRYSTAL PALACE SCHOOL OF ENGINEERING.

THE certificates awarded by the examiners to the most successful students during the summer term were distributed on Saturday last in the school, in the south tower of the Palace, by Sir James Nicholas Douglas, C.E., Engineer-in-Chief to the Trinity House, and Member of Council of the Institution of Civil Engineers. The report of the examiners, which was read by Mr. Shenton, the superintendent, stated that the number of students who had attended the lecture examination on railway and dock work was thirty-six, of whom twenty-one were eligible for examination, and of these sixteen had passed; that the division of civil engineering and the drawing office of the mechanical course showed by the results attained the value of the system of instruction practised; and that the workshop practice, as exemplified by the specimens of fitting and patterns, was highly creditable.

Sir J. Douglas said this was the first time that he had visited the school, and he had been highly gratified by the way in which everything was carried on in it. He was sure they would all have been gratified by the report of the examiners. It was his good fortune to commence his career in the workshop. He had four years of it, and he had always considered it the backbone of his career. There was no royal road to engineering. They must make up their minds to a life of thoroughly earnest hard work, and if they did, and they had ordinary ability, they would probably succeed. The life of an engineer was one of noble enterprise; he came in contact with all the great forces of nature, and it was his duty and his privilege to tame those forces, and to utilise them for the benefit of mankind and the progress of civilisation. Therefore no nobler career could be opened before a young man, and to begin that career well he must begin it in a well-regulated workshop. He asked them to avail themselves of the splendid opportunity afforded to them there of acquiring a thoroughly practical training. In acknowledging a vote of thanks given to him for his address, Sir J. Douglas said in the early days of the Institution of Civil Engineers it was thought that forty or fifty members would be a good number, and that they could do all the work that was required, but now there were more than two thousand members, and there was room for fifty times as many.

### UTILISATION OF SMOKE.

AT Elk Rapids, Michigan, is a blast furnace in which are manufactured fifty tons of charcoal iron per day. There are twenty-five charcoal pits, constructed of brick. Each pit is filled with 100 cords of hard wood and then fired. The vast amount of smoke from these pits, which was formerly lost in the air, has now been utilised by Dr. Pierce, a chemist. Chemical works have been erected, which are thus described by the *Boston Courier*:—First, they have a circular tube made of wood, with pine staves 16 feet in length, bound together with heavy iron hoops. This tube is placed directly over the pits in a horizontal position, with an opening from each pit into the tube. At the end nearest the building there is a large drum containing a rotary fan propelled by machinery, the power of which is gas. That acts as a suction or draft for the smoke, which is conveyed into five stills filled with copper pipe 2½ inches in diameter. The boxes in which the pipes are situated are 20 feet square, 8 feet deep, made of heavy pine, and filled with cold water; these are all connected by copper pipes; they are connected with the main still, 100 feet in length, 10 feet wide, 8 feet deep, filled with copper pipes 2½ inches in diameter in a horizontal position, surrounded with cold water, from this conveyed to a purifier, from which runs what is called pyroligneous acid, which is as clear as amber, with an unpleasant odour. From the acid is produced, first, acetate lime; second, alcohol; third, tar; the fourth part produces gas, which is consumed under the boilers. Each cord of wood contains 28,000 cubic feet of smoke; 2,800,000 feet of smoke handled every 24 hours, producing 12,000 pounds acetate of lime, 200 gallons alcohol, 25 pounds tar. These articles have a commercial value in the manufacturing of various articles. The alcohol has been contracted to a firm in Buffalo, New York, for five years, they furnishing the packages and receiving it at the works at 80 cents per gallon. The smoke from 40,000 cords of wood consumed per annum is thus made a source of much profit, as the works are nearly automatic.

The Rochdale Town Council have decided to pull down the spire of the Town Hall, which is nearly 70 feet high above the stone tower, owing to the whole structure, which is timber covered with lead, being in a rotten and dangerous state. The erection was completed about eleven years ago.

### THE ART UNION OF LONDON.

THERE is now on view at 112 Strand an interesting collection of pictures, being the forty-sixth annual exhibition of the works selected by the successful members of the Art Union of London in the drawing of the present year. The catalogue contains between eighty and ninety pictures, ranging in value from 100*l.* to 10*l.*, which have been chosen by the respective winners from the walls of the Royal Academy, the Society of British Artists, the Grosvenor Gallery, the Royal Hibernian Academy, the Royal Scottish Academy, the Royal Society of Painters in Water-Colours, the Institute of Painters in Water-Colours, the Royal Albert Hall, and the Society of Lady Artists. With few exceptions the pictures are exceedingly good, and show no small amount of taste on the part of those whose task it was to select them. One of the first the visitor comes across is a picture entitled *Sleep*, by Mrs. Laura T. Alma Tadema, showing the listless form of a young girl who has apparently dozed off in the middle of her work of stocking knitting, while a large book has fallen on her lap, and lies open at her feet. This picture has been drawn from the Royal Academy as a 75*l.* prize. Further round, one is struck by a small picture from the S.B.A., by G. S. Walters, called *The Mist of the Morning*, in which two smacks at anchor are gradually becoming visible through the early haze rapidly disappearing under the influence of the rising sun. Mr. Walter Stacey's *Boys will be Boys*, a capital painting, has been chosen from the S.B.A. as a 60*l.* prize, and attracted a good deal of attention from visitors yesterday; as did also *A Waterfall on the Dulus* (75*l.*), by J. B. Smith, from the same gallery. The most important prize is that to the value of 100*l.*, which this year has been won by Señor L. De Ysasi, and selected from the S.B.A. by him, in the shape of a picture by G. A. Holins, *Mothers and Children*. It represents a young woman standing at a farm gate, and dandling her infant before a she-goat and her two kids, which contemplates the little urchin in mild wonder, the whole forming a very pretty and interesting group. Besides the picture prizes, all of which are well worth visiting the Strand to see, a large number of sculptures, vases, and china tazzas are given away, specimens of which may be inspected in the same rooms as the pictures. The exhibition will remain open until September 2.

### THE CHANNEL TUNNEL.

MR. JUSTICE NORTH sat as Vacation Judge on Wednesday in Vice-Chancellor Hall's Court, Lincoln's Inn, when the application of the Crown for sequestration was mentioned. The action was that of the Attorney-General *v.* The South-Eastern Railway Channel Tunnel Company and others, and the motion was for sequestration, on the ground that boring had gone on in violation of the undertaking given by the defendants when the matter recently came before Mr. Justice Kay for an injunction to restrain the boring, and for an order for inspection. On the motion being called on Wednesday Mr. Dundas Gardner said the Attorney-General and Mr. Littler, Q.C., were now in conference with the view of arranging terms, and the matter would be mentioned later on, with his lordship's permission. Later in the day the Attorney-General said Mr. Littler, who appeared for the defendant company, and himself had spent the interval in bringing the matter in dispute to a determination. He had obtained from his learned friend an undertaking that the boring-machine should not be used again for any purpose whatever. Having obtained this positive undertaking, he felt that he ought to be satisfied, and therefore asked his lordship to allow the motion to stand over *sine die*. The motion was therefore adjourned *sine die* in terms of the Attorney-General's application.

### CHURCH BUILDING AND RESTORATION.

Killearn.—A new parish church for Killearn has been opened. The length of the building over the gables is 96 feet, the breadth 41 feet, and the transepts measure 15 feet long by 27 feet broad. The general character of the architecture is Gothic of the Early English type. The nave roof, which is supported by open timbers, is lined throughout with pitch pine between rafters, that are supported on purlins stretching between carved and moulded principals. These principals spring from moulded wood corbels set in the walls, and borne on small polished stone shafts, with ornamental caps and bases, standing on carved stone corbels. The transepts have also open timbered roofs of similar design, though somewhat simpler, the ridge being lower than that of the nave. There is accommodation for 600 persons. Messrs. D. & J. Bryce, of Edinburgh, are the architects. The contractors for the various works were:—Mason-work, Mr. A. Stuart; joiner-work, Mr. R. Shillinglaw, Edinburgh; painter and decorators' work, Messrs. J. Ballantyne & Son, Edinburgh; slater-work, Messrs. J. Morrison & Son, Glasgow; plumber-work, Messrs. Burn & Baillie, Edinburgh; plaster-work, Mr. J. Annan, Edinburgh; glazier-work, Messrs. Alex. Cunningham & Co., Edinburgh; heating apparatus, Messrs. J. Combe & Son, Glasgow. The tower bell has been made by Messrs. J. C. Wilson & Co., Glasgow.



**Colwyn Bay.**—The corner-stones of a chapel, schools, and minister's manse have been laid. The material used for chapel and schools is Yorkshire stone, with local stone dressings. The chapel will accommodate about 700 worshippers, and has on the west side a tower and spire rising to a height of 140 feet. It is in the form of a Latin cross, and consists of a nave, aisles, and transept, and a polygonal chancel. The architect is Mr. Robert Curwen, London and Liverpool. The contractors are Messrs. Foulks & Son, of Colwyn Bay, and the amount of the contract is about 6,000*l*.

**Cockington.**—The church of Cockington, situated in the park of Cockington Court, is to be thoroughly restored, under the direction of Messrs. Hine & Odgers, architects, Plymouth. The works will include the setting upright portions of the arcades, the removal of the west gallery, the removal of all plaster from the walls internally, the restoration of the screen and pulpit, and fitting the choir and aisles with carved oak stalls and seats. Several ancient bench ends will be re-used. The church contains a font, the gift of Robert Cary, as recorded on a brass still affixed to the masonry, and on the surface of the font may still be seen the remains of the original polychrome with which it was adorned. In the upper part of the tower is a room with a fireplace, supposed to have been occupied in pre-Reformation days by the serving priest.

**Sedgley.**—The foundation-stone of a new chancel for the church of St. Mary the Virgin has been laid. The new erection will provide additional accommodation for 80 sittings. On the north side of the chancel space is left for an organ-chamber, and on the south side for two vestries. At present only the chancel is being proceeded with. The erection will be in keeping with the church, of red bricks, faced with Gornal stone. The work is being carried out by Messrs. J. Jones & Son, Sedgley, from plans by Mr. T. H. Fleming, Wolverhampton.

**Wotton-under-Edge.**—At a public meeting held to take into consideration the restoration of the parish church, it was determined that the work should be carried out according to the plans and recommendations of Mr. F. S. Waller, diocesan architect. Among the works proposed it is recommended that the galleries should be taken down, and that the tower-arch and window be thrown open; the dressed stonework of the windows, piers, and arches be cleaned, and the plastering on the walls be made good; the windows, where the stonework is displaced or perished, carefully restored; the chancel to be re-arranged; the stonework of the walls, windows, doorways, &c., outside, to be properly repaired.

**Arkingarthdale.**—The foundation and memorial stone-laying took place on Bank Holiday of a new Wesleyan chapel at Arkingarthdale, North York, of which Messrs. Leeming & Leeming are the architects. The design is in the classic style of architecture, accommodation being provided for 345 persons at 2*s*. each. The masonry work is let at per schedule to Mr. J. Smith, of Arkingarthdale, but the other works are unlet, being now in process of tendering.

**Alfreton.**—Plans have been prepared for a new Wesleyan chapel to be erected in High Street, Alfreton, and the contracts have been let. It is intended to build a chapel, with schoolroom and classroom on the ground floor, and rooms for service on the second floor to accommodate 150 worshippers. The front of the building is to be of Mansfield pressed brick, faced with stone. The timber for seats and rostrum, &c., is red deal and red fir. The tender of Messrs. Goodall & Dennis, of Pinxton and Kirkby, for 351*l*. has been accepted. Mr. John Wills, of Derby, is the architect.

## ART WORKMANSHIP.

**Brass and Bronze Work.**—Messrs. Crichley, Westley & Co. have completed an elaborate brass fender to the order of a foreign potentate, and which is one of the most remarkable works of its class. It was designed by Mr. John Ward, and the style is Renaissance. The fender is made of brass with the exception of a sub-base of bronze, and figures of mermaids at the corners and a mask face in the centre, also of bronze. The combination proves in this instance a most effective one. The bases are richly ornamented with worked mouldings and banded reeds, surmounted with bronze figures of mermaids facing opposite directions, and occupied with their traditional toilet arrangements. From the tail of these figures grows a bracket or support on to the top rail of frieze, ornamented with raised leaf-work and scrolls. The frieze, or portion between the bases, comprises elaborately-worked mouldings with fluted and ornamental interior space, the corner of which is enriched with an exquisite mask in bronze with a polished brass frame. The whole fender is mounted upon a bronze sub-base about 5 feet 6 inches in length, and the extreme height is 20 inches. The ashpans comprises enriched mouldings with a frieze like to that of the fender, with a similar mask in the centre, but of smaller dimensions. The fire brasses are also of special design in polished brass ornamented with richly-worked swells and bronzed dolls or heads. The tongs open from a square box by means of spring handles. The pan of the shovel is ornamented with *repoussé* work *en suite* with the ornament on box of tongs. The suite complete will cost about 100*l*.

**A Painted Window**, of five lights, with rich tracery, has just been erected in Whittingham Church, Alnwick. The centre light has a figure of our Lord as the Good Shepherd, supported on each side by the four evangelists; the figures, being life-size, are set on richly-coloured backgrounds; under each figure are appropriate emblems. The tracery is filled with foliage, the central or larger piece having a representation of a dove, with rays of light. The colouring is full yet harmonious, and the work has given great satisfaction to the subscribers, who have placed the window in the church to the memory of the late vicar. The work was executed at the West of England Stained-glass Studio, Stonehouse, Plymouth.

**A Painted Window** has just been erected in the church of Islington near Lynn, containing the subject of Mary at the feet of Jesus, and below it a memorial brass with the arms of Bagge impaling Keppel. They have been executed by Mr. Taylor, of Berners Street, for Mr. Thomas Bagge, in memory of his wife, who was a descendant of the Earls of Albemarle.

## TOWNS IMPROVEMENT.

**Thoroughfare between Oxford Street and Charing Cross.**—Steps have at length, says the *Times*, been taken for making, at all events, a beginning of this long-needed public improvement. The materials of about forty houses about Newport Market have lately been sold by Messrs. Eversfield & Horne; the structures themselves are in process of demolition, and in the course of another month a large portion of the following streets will have disappeared:—Newport Court, Little Newport Street, Market Row, Market Street, Prince's Row, Lichfield Street, Hayes Court, and Grafton Street. The market itself was named after the Earl of Newport, on whose land it was built. It was hereabouts, according to Mr. W. Thornbury's "Old and New London," that the famous "Orator Henley" held his mock-preachings; and, if we remember right, the celebrated Horne Tooke was the son of a poulterer—or, as he himself used to say, of a "Turkey merchant"—in Newport Market.

**Hyde Park Corner.**—It has been decided that when the arch at Hyde Park Corner is removed, in accordance with the plan of Mr. Shaw Lefevre, which has just received the assent of the House of Commons, the statue of the Duke of Wellington shall not be replaced upon it. Those who remember the placing of the statue in its present position are aware that the act was then declared to be merely experimental, and that the public taste immediately pronounced very strongly against the appearance presented by the horse and rider; a principal cause of objection being that they were set lengthwise on the arch instead of across it, as is usual in such structures. But it was easier to set the Duke on the arch than to bring him down, and for a generation past he has kept his place amid the indifference rather than the admiration of Londoners. A new site will now have to be found for this colossal work of art. It was the production of Matthew Cotes Wyatt, who had a considerable reputation in his time, and was placed in its present position in 1846. The cost of it was defrayed by a large public subscription.

## ARCHÆOLOGY.

**The Somersetshire Archæological Society** on Thursday closed a three-days' meeting in the neighbourhood of Chard. On Wednesday the Roman villa at Walford, Whitestanton Church, camp, and manor-house were prominent on the programme. Mr. E. A. Freeman, D.C.L., Bishop Clifford, Sir A. H. Elton, and the Rev. H. M. Scarth have been amongst those who contributed papers, and a local museum added to the attractions of the gathering. The Society contemplates the publication of a "*Bibliotheca Somersetensis*," the MS. of which has already been prepared by the hon. secretary, who has been engaged twenty years on it, and the Dean of Wells (Dr. Plumptre), who has taken part in the proceedings, said he looked forward with great pleasure to the appearance of this work. The Committee of the Society have, under instructions from them, directed attention to the pathways of roads leading to Taunton Castle.

**Guildhall Museum.**—A collection of old views of celebrated City buildings of the past has been placed in the annexe room adjacent to the above-named rendezvous in Basinghall Street, which will be found of much interest to those with antiquarian tastes who like, while seeing how they appear in this improving age, also to see how they appeared in their forefathers' days. The following is, according to the *City Press*, the list of the places illustrated:—Westminster Hall and Abbey; Lord Nelson's funeral procession by land and water; Crypt within Aldgate, pulled down in 1872-73; Old Royal Exchange, Cheapside Cross; Gerard's Hall, Basing Lane, Bread Street; Inside Guildhall, 1690; Exterior of Old Guildhall; Crypt of Bow Church from north side near the east end of nave; St. Bartholomew Church, Royal Exchange; St. John's Gate, Clerkenwell; Pye Powder Court, Cloth Fair; Crypt on site of the late College of St. Martin's-le-Grand; Ruins of St. Leonard, Foster Lane; Royal Palace (called Placentia), East



Greenwich; Old Palace, Hampton Court; True and exact prospect of the famous City of London from St. Marie Over's Steeple in Southwarke, in its flourishing condition before the fire; another prospect of the said City from the same place as it appeareth now after the said Calamitie and Destruction by fire in the year MDCLXVI.; Egyptian Hall, Mansion House; the exterior of the Mansion House, with what was called Noah's Ark on the top of it, since pulled down; Sir Paul Pindar's Lodge or Garden House, Half Moon Alley, Bishopsgate Street; Old London Wall.

### SANITARY WORKS.

**The "Sanitary Engineer,"** of New York, says that the first case of persistent violation of the plumbing law in that city, after a warning had been sent, has resulted in a victory for the Board of Health. Although there have been upwards of two hundred notices of violation sent to the owners of houses of which the plumbing or drainage had been found by the inspectors not to conform to the regulations, no one has before cared to defy the Board and test the law. In this case the house drain was of earthenware with defective joints; the soil-pipes also had very defective joints, the traps were unventilated, and in many other respects the work was in violation of the requirements. The owner paid no attention to the notices of the Board, and proceeded to complete the houses. Accordingly the Board put the case in the hands of their attorney, who obtained an injunction restraining the owner from selling or renting them. This he tried in vain to get removed by the Court, and at last repented, having found houses which he could neither rent nor sell not a very profitable investment. He has signed an affidavit to do whatever the Board may require, which will be to reconstruct the work, or so change it as to make it conform in all respects to the law.

### GENERAL.

**Plans by Mr. H. C. Charlewood,** architect, of Manchester, have been approved for the new church to be erected in Higher Chatham Street, Chorlton-upon-Medlock.

**Messrs. Cornish & Gaymer,** contractors, North Walsham, have undertaken the restoration of the nave roof of Deopham parish church, under the direction of Mr. Ewan Christian.

**The Death** of the landscape painter M. Alexandre Desgoffe is announced. He was a pupil of Ingres, and in 1868 executed decorative works in the Salle des Etudes de la Bibliothèque Nationale.

**Mr. E. Howarth,** curator of Weston Museum, Sheffield, has received on loan for the Museum, from the executors of the late Mr. Charles Brewster, of Retford, a large and valuable collection of pictures. The collection was opened to view on Thursday.

**The Paris Authorities** have appealed to the inhabitants to economise water, the absence of snow and rain last winter having told on the springs. The watering of the streets has been limited to twice a week.

**The Metropolitan Board of Works** have, with certain stipulations, granted permission for the construction of a subway from the Middle Temple to the Law Courts.

**The Bo'ness Town Trustees** have decided to close the Town Hall after the 31st, on account of the insecurity of the building through the existence of disused mine workings underneath, which have been causing subsidence for several months past.

**The Erection** of the new pier at Broadstairs has been stopped as a result of the proceedings lately taken by the Marquis of Conyngham, the owner of the foreshore.

**An Amateur Art Exhibition** was opened at Exeter on Tuesday by the Mayor, who observed that the extent and character of the Exhibition had greatly outstripped the expectations of the Committee.

**The Gaelic Society** have decided to present Professor Blackie with a testimonial in recognition of his services to the Highlanders. The testimonial will in all probability take the form of a portrait of the Professor.

**Glasgow Municipal Buildings.**—The authors of the design bearing the motto "Gauntlet," one of the four specially selected in the final competition of ten, are Messrs. Thos. Worthington and J. G. Elgood, 110 King St., Manchester.

**The Sanitary Institute of Great Britain** will hold its fifth autumnal Congress and Sanitary Exhibition at Newcastle-upon-Tyne, on September 26 to 30, under the presidency of Captain Douglas Galton, R.E., C.B., F.R.S. Among the vice-presidents are the Right Hon. the Earl of Durham, Right Hon. Lord Algernon Percy, Sir W. G. Armstrong, K.C.B., and others. Professor De Chaumont, M.D., F.R.S., has consented to give a lecture to the Congress.

**The Aberdeen Town Council** proposes applying to Parliament in the ensuing session for a City Improvement Bill.

**The Mills Building,** New York, has been wired for 5,588 Edison lamps. The conductors consist of 1,650 feet of Edison's patent electric tubes, 628 feet of lead pipe containing taped wires thoroughly insulated, 23,658 feet of zinc tubes, 75,909 feet of wire conductors, and 24,162 feet of wooded receptacles, placed between the doors, to hold the system of distributed wires. The total amount of wires used was 3,774 lbs., besides 48 vertical main cut-outs and 253 division cut-outs.

**An Installation** of fifty "Swan" Incandescent Electric Lights has just been completed at 279 Edgware Road, for Mr. Bowron, provision merchant, and a great saving is expected in the amount of the provisions spoiled by the heat of the gas, which is now dispensed with. The work has been carried out by Messrs. Edmundson & Co., of 19 Great George Street, Westminster, who are also engaged in fitting up these lights in several large country mansions, where a similar saving is expected, owing to absence of dirt and smoke which necessitates frequent painting and decoration.

**Two Stone Coffins,** apparently of very ancient date, have been discovered upon the northern side of Castle Church, Stafford. One of these is plain and the other sculptured, with a rude chevron and *fleur-de-lys*. The position of the coffins upon the northern side of the church, and the remarkable sculpture of the one, seems to indicate such unusual circumstances as would make them worthy of the notice of archaeologists.

**A Winter Exhibition,** for the purpose of developing the economic and general application of electricity for daily requirements, is proposed to be held at the Royal Aquarium, Westminster, from November 1 to March 1.

**A Carved Circular Pulpit** has just been completed and erected in Caldmore Church, Walsall. It is of Caen stone, with rich serpentine marble columns in front and coloured Irish marble column at the back. It is carried out in the early English style, and is from the works of Jones & Willis, Birmingham and London.

**The Committee** appointed to negotiate for the construction of a new church on the West Cliff, Whitby, held a meeting on Tuesday, the rector (Rev. Geo. Austen) in the chair. A letter was read from Sir George Elliot, Bart., M.P., in which, reverting to his promised subscription of site and 2,000*l.* towards the fund, he reminded the Committee that, in appointing Mr. Armfield as architect, they had forgotten the conditions attached to the gift, namely, that he should be consulted as to the appointment of architect. After some discussion it was agreed, with some expression of sorrow, to rescind the resolution referred to, and Mr. Johnson, of Newcastle, was unanimously appointed architect.

**London Water Companies.**—An analysis of the accounts of the Metropolitan Water Companies for the year ended December 31, 1880, compiled and arranged by Mr. Alfred Lass, has just been issued. It is that gentleman's intention to publish similar analyses of subsequent year's accounts, those now laid before the public referring to the transactions of the companies immediately subsequent to the inquiry into their undertakings by Sir William Harcourt's Committee.

**A Bust of the late Sir Charles Hastings,** by Mr. Brock, of Worcester, was presented to the city of Worcester on the occasion of the jubilee meeting of the British Medical Association just held there. Mr. G. W. Hastings, M.P., speaking on the occasion, said that Sir Charles Hastings, in his lectures, always advocated sanitary science, and impressed upon all the necessity of having pure water, well-ventilated houses, and clean streets. How he had grasped this great question had been shown by the advice given by the Social Science Association, in which he took a great interest. In sanitary science he did what he could to make its benefits known amongst the people; and the speech he then made, and which was published, showed how largely and deeply he had studied the question.

**Quantity Surveyors.**—The St. Pancras Board of Guardians having intimated that they would themselves appoint the quantity surveyors for the new workhouse buildings, the Workhouse Accommodation Committee met on the 8th inst., and after considering the qualifications and standing of the applicants (about twelve in number) selected the three following firms as fully entitled to the confidence of the Board, viz. Messrs. Maughan & Cuxson, Messrs. Sandall, Corderoy & Farthing, Messrs. Stoner & Sons; the votes obtained by each firm being 9, 8, and 7 respectively. The Committee's report was presented to the Board on the 10th inst., when Messrs. Sandall, Corderoy & Farthing were appointed. The total outlay contemplated is about 100,000*l.*, and the surveyors' charge allowed by the Board is 1½ per cent.—The Fulham Board of Guardians met on Thursday, the 10th inst., to consider applications received in answer to their advertisement for a surveyor to take out the quantities for the new Fulham Infirmary. The number of applicants was twenty-six; these were brought by ballot to two, viz. Messrs. Quilter & Hardcastle, and Messrs. Maughan & Cuxson. These were again put up, and each firm obtained five votes, when the chairman gave his casting-vote in favour of the former, who were appointed.



# The Architect.

## THE PHILOSOPHY OF ARCHITECTURAL SKETCHING.



NOTHING is without its philosophy ; and when our architectural students are just now pervading England, with Scotland and Ireland in some measure, and certainly the Continent of Europe in a very large measure, "filling," as the phrase goes, "their sketch-books," there is a sufficiently clear philosophy in their purpose and their work. It is not amusement, healthful recreation, or agreeable holiday occupation, and nothing more. Neither is it the covering of paper for the sake of a custom, nor even the collection of indispensable material for study and use. Amusement, recreation, and holiday occupation can be had in many ways with less trouble, less expense, and less strain upon faculties which are already in many cases a little overstrained. The accumulation of examples of design can be better done in the time at disposal by the purchase of photographs and books, or even by carrying on one's back one's own camera. But the real benefit to be derived from a sketching tour, if judiciously conducted as a course of instruction and exercise, is what cannot well be had by any other means.

There is a very old maxim which most people think they understand ; and so, superficially, they do—*Ex nihilo nihil fit*. Of course no thing can be made out of nothing ; the equation, *nil equal to nil*, is too clear to be disputed ; the man who has in his head emptiness brings out of it emptiness ; and so on the changes may be rung to any extent. But, in respect of such intellectual work as architectural design, it is peculiarly the fact that what has not been got into the designer's wits cannot be got out of them. The doctrine of intuitive genius is quite exploded. Genius of the best is but cultivated faculty, and faculty of the best is a felicitous but wholly adventitious organisation. When the man of genius is accustomed to regard his excellence as a thing he has to thank himself for—or perhaps his mother (it is clever women, they say, who have clever sons) ; his pride—and sometimes it is pride indeed—is after all no better, if no worse, than that of the man of riches who has inherited from others what he never could have made for himself. At any rate, genius or no genius, the expert designer of architectural and kindred art cannot produce a thing out of no thing, any more than a mathematician can, and, in other words, if he is to work at all with skill he must acquire that skill. What is more, his production, as has been often said, must be reproduction.

There is an appearance of paradox, no doubt, in this concluding phrase, but that is owing to the mere ambiguity of language. The real meaning of the proposition is that the designer, if he has not acquired specific material for design, or if he has not attained to the specific knack of using that material, fails to be able to design, by reason of want of knowledge, or want of skill, as the case may be. As a notable case, it is well known that a highly-cultivated Classic architect, who has never studied and practised Gothic, is actually quite unable, whatever may be his general ability and taste, to produce creditable Gothic work : we need scarcely add that our Gothic designers, forced by change of fashion to try Classic, are seen to have just as little success, even the best of them. Not only so, but there are no doubt men in City counting-houses and lawyers' offices who would have made the most admirable architects, if chance had not turned their attention in some other direction than towards the field where alone the requisite knowledge is to be picked up and the requisite skill to handle it. The work of design has otherwise been truly described as nothing more than the recombination of ideas or elements which have previously been laid up in the designer's mind ; laid up perhaps under very different conditions and in a very different shape, and often not recognisable in their recombination, but invariably *there*, because out of nothing comes but nothing. The cause and the effect, in fact, are mathematically equal.

The philosophy of the sketcher's labour, therefore, is that he is laying up ideas and learning how to handle them in

recombination. The process of sketching, indeed, if properly conducted, is the best possible means of acquiring both the material for use and the skill for using it. The more the student thoroughly sees and thoroughly understands—let us say "reads, marks, and inwardly digests"—the more he knows, in every sense of the word ; a full sketch-book is a full purse, therefore, and the quality of the contents is the quality of the coin. So also, the more he handles, the more he can handle ; practice, as the copybook used to tell us, makes perfect. The sketcher, therefore, by carefully delineating the subjects of his observation, carefully studies them ; analyses them, if perhaps unconsciously ; stows away in the recesses of subtle memory the essence of them ; acquires them as so much intellectual property ; accumulates for himself wealth of ideas and associations, to be employed hereafter as circumstances may happen to suggest. This is the acquisition of material for design by the best of all practical processes. At the same time, secondly, the sketcher is more and more "getting his hand in" for the twofold work of the recombining of those ideas and associations and (what is quite of equal importance) the handling of the instrument—draughtsmanship—whereby this act of recombination or design has to be performed. Much knowledge makes an easy fancy ; much drawing makes a facile hand ; sketching therefore makes both.

Now the fact is not at variance with this argument, but rather one to which it directly points, when we remember that there are architects of great academical knowledge who are the feeblest of designers, and others whose power of draughtsmanship is marvellous, but whose skill is not according to knowledge. A scholar may be a perfect cyclopædia of information, and yet have no more literary genius than his neighbour ; on the other hand, the poetaster may be of imagination all compact, while his knowledge of the world in which he flutters is on a level with that of the primrose by the river's brim of which he is so passionately fond. Nay, in plain language the case is even harder still : much knowledge may make the architect, not mad, but worse—stupid ; whilst much facility of drawing may make him, or rather another of his brethren, a mere sounding brass and tinkling cymbal. This cannot be helped ; there must be extremes in everything.

But, taking the ordinary well-trained, well-instructed, and well-intentioned architectural student, we cannot recommend to him any other educational process upon which he can so well rely as upon the practice of sketching for the double exercise of acquiring first—we say again, however unconsciously—a stock of material for the work of imaginative design ; and for attaining, secondly, by practice, the knack, not merely of handling the pencil, but of handling this material. What kind of subjects, then, shall he prefer to sketch ?

To this question no sufficiently clear and comprehensive answer can be given in few words. It is of no use in these scientific days to say he must throw the reins on the neck of his instinct and leave the choice to chance. At the same time it is impossible to lay down even the semblance of a hard and fast rule which all may follow. Inclination, no doubt, is very good evidence of aptitude ; although, in ardent youth, facility and ease are too often the fallacious guides of taste. Perhaps the best rule is to follow the lead of the best men, but, above all, to let palpable eccentricity go its own way. No one need desire to be before his age ; and the folly of a clever fool is almost more foolish than that of a dunce. The sketch-books of a fair average excursionist ought to be at any rate consecrated to quality rather than quantity. To confine attention to work which is really very good—let us say of the best—is more than we can propose. Architecture of the very highest order—supreme refinement in supreme repose—is not likely to be sufficiently in demand amongst the public of England for a long time to come. The picturesque has laid hold upon the land. And so be it ; picturesque architecture supplies a large field—and of course to a sketcher an especially delightful field—for study of a certainly satisfactory kind. At the same time, if the student can be persuaded to devote a share of his time to the less attractive and more refined examples of the non-picturesque, it may safely be said he will never regret it. When the fashion was to measure and delineate with scrupulous precision the graceful mouldings and delicate ornament of ancient Greece, the effect of the mere exercise upon the mind was acknowledged to be in every way exquisite ; and to the students of another nation than our own it is so still. We cannot be wrong, therefore, in recommending our young men, especially in their Continental rambles, to



take in hand, when opportunity offers, if only for a change, some of the very refined modern work of the best French, Belgian, Italian, and German schools. It is difficult to make "a good sketch" of such work, no doubt; but all the better for the sketcher; a tumble-down alehouse in a rustic hamlet is very much easier, but it does the sketcher, not only as much harm as good, but sometimes more harm, as an architectural designer, than he is ever aware of till it is too late.

The best *architectural* subjects, at any rate, ought to be the rule, as distinguished from things more fascinating but non-architectural. The object of the architectural designer is to lay up architectural examples and to acquire architectural skill.

### AUTUN.

BY A CORRESPONDENT.

THE traveller who finds himself at Nevers, under the pleasant necessity of making his way from central France towards her eastern boundaries, should by all means spare a day or two to leave the iron way and turn aside into the carriage-roads through the forests of the Morvan. Issuing from that delightful region for all lovers of wild woodland, streams, and ever various change of mountain and valley—be they wayfarers on foot, horseback, or four wheels—he will, or may, by the picturesque ravine of the Canche drop down past La Selle into a well-watered plain, encircled on all sides by mountains of no great height, but of fine outline. To the south-west rise the heights of Morvan, with the Mont Beuvray conspicuous, site of ancient Bibracte of Gallo-Roman times; in face, on the eastern side of the curving plain, slope up, with more abrupt spring at every higher terrace, hills richly wooded, cleft by deep ravines, an umbrageous and deeply-tinted background for the city, only younger than Bibracte, successor to its power, *Augustodunum* of the Romans, Autun of modern France. Built on the side of the hill, surrounded by its ancient walls, enclosed again by walls and towers of mediæval date, and crowned at its highest point by the grey cathedral of Saint Lazare, the town of Autun is an impressive end to a day's journey—a worthy reward for a *détour* from the beaten track.

This little city, once famous and powerful, is now a station on one of the loop lines off the main railway of the Paris and Lyons route; but before railways were it was a chief resting-place on a post-road from Lyons which ran this way and right on through the Morvan, the Roman road of AGRIPPA, of which the traces yet remain. So late as last year diligences yet traversed this road, but it was said to be their last season. Two of the grand Roman gateways yet are standing—*Porta Senonica*, or the gate of Sens for Paris, now called *Porte d'Arroux*; and *Porta Lingonensis*, or the Gate of Langres, now called *Porte St. André*. With their massive uncemented masonry, and grand, stately proportions, arcaded in double storeys, even in ruin these gates are most imposing. The *Porte St. André* was partially restored in 1847 by VIOLETTÉ-LE-DUC; it is, perhaps, the finer monument of the two, built in the Ionic order, with sculptured frieze and medallions, and arcading of varied proportion, and having projecting wings or towers which give shadow. These fortified gateways were supplemented by a system of earth-works and solid outposts, of which last one remains, and is popularly called the Temple of JANUS. It is a solid shell of masonry, broken within by arcades and niches below, with window apertures above; it stands now amid the meadow grass and clear streams, grand in its massive simplicity, and helps to increase in the landscape surrounding of Autun those reminiscences of Roman Italy which the curving plain and circling mountain line, and something in the colour too, constantly bring up. Two sides of Autun the Roman wall rears its massive bastions, now shaded by avenues of lime and chestnut planted beneath. As the town lies on the slope, the wall takes the slope also, and stalks up and down hill, setting its round towers at regular intervals, and affording an ancient massive substructure for many an incongruous construction of to-day. Garden terraces are planted on the top, cellars and storehouses scooped out of the thickness of the wall, or flights of steps managed by adjustment of the outer course. In one place a mediæval tower has been built on the ruins of the Roman tower, and this again is surmounted by an addition of the present century, coved roof, and conspicuous Madonna—sign of the pious Ursulines, who

now hold the old tower within conventual enclosure. Within these venerable defences, gardens, streets, miscellaneous buildings, fill up the space on the lower slopes up to the inner circle of the mediæval wall which marks how the city had shrunk in compass since its Roman renown. FRANCIS I., after Autun had suffered by the fortunes of war—fire, siege, and pillage, over and over again—united within the same wall two separate portions of the town, thereby leaving outside the enclosure some of the great abbeys, as can be still traced by their ruins. The wall which FRANCIS I. joined, so to speak, makes one of the most picturesque features of the place: erections of various dates, with more or less quaint constructions of deep and overhanging roofs, round towers and square towers with conical tops, projecting balconies, dormer windows and long staircase lights, break up the winding wall; gardens and orchards muffle round the feet, and the town mounts up within, up to the Cathedral of St. Lazare.

St. Lazare is not a strikingly beautiful edifice, but it is interesting and rather imposing. It was built in the twelfth century, pulled about in the fifteenth, and furnished with a very elegant stone *flèche* by Cardinal ROLIN. The interior presents that curious conjunction of Classic treatment and Gothic form which marks the Romanesque transition in parts of Central France. Fluted pilasters, Romanesque capitals, square piers, are found with pointed arches and vaulting. For the rest, the interior, though lofty and massive, is not pleasing; by far the most striking feature of the church is the great western open porch, which covers a space wide as the nave and the two aisles, and is approached by double flights of steps. The tympanum over the centre door is filled by a curious sculpture of *The Last Judgment*, in the archaic energetic style of the sculpture at Vézelay, but more grotesque. There is a curious story told about this piece of sculpture. During the "Reign of Reason" VOLTAIRE came down to visit Prince TALLEYRAND, Bishop of Autun, and of course he inspected the cathedral, where, seeing this sign of a devout age long past, he remonstrated, and pointed out that the enlightened people of Autun would do well to cover up anything so foolish, barbarous, and ugly as this archaic *Last Judgment* with a good smooth plaster coat. He being so great a man, his advice was taken; and when the worshippers of Reason had come to the pass of breaking up the imagery of the Catholic cult, the sculpture of Autun, safe beneath its plaster, escaped injury. Within the last thirty years a stranger knowing in the arts was struck by the anomaly of this plain tympanum in such a great cathedral, and observed, moreover, a peculiar inequality of surface, which indicated something beneath. So he got up a ladder and began chipping, and having very soon found that there was something beneath, he wrote to Paris for permission to meddle with this registered "ancient monument," and, permission obtained, chipped in good earnest, until out came the *Last Judgment* in perfect preservation, kept safe through troublous times, thanks to anti-Christian VOLTAIRE! They took casts of it and of the fine figures and devices on the door-lintels, last year, for deposit in the new retrospective museum of casts at the Trocadéro. Another curious occurrence that befell recently at this church happened only the other day, when, by a fine feat of engineering, they removed the supporting piers of the central tower, lifted the stone *flèche* bodily in the air, replaced the piers with more reliable courses, and set down the spire again! That was a kind of thing the good people of Autun would appreciate, a piece of practical nineteenth-century audacity and invention. As regards care for "ancient monuments," they are most decidedly in opposition to anything of the kind; and it is only by dint of great pertinacity that the few savants and art-loving gentry of Autun can hinder the constant demolition of the remaining traces of Mediæval or Renaissance domestic architecture here and there left in the town. To make a short cut for business traffic, your citizen of Autun would break up the tombs of his forefathers and mix their venerable ashes with the mortar for a new wall. Not that any commercial activity of Autun justifies such utilitarian views. The town is out of the main routes; it has no special industrial developments of any importance; it is a respectable, moderately thriving, cathedral town, owing its importance chiefly to its episcopal dignity, and to the large seminaries for the instruction of Catholic youth which occupy a great portion of the habitable area. Such establishments are in accord with the most conservative repose, and it would be well that Autun should preserve itself in peace, if the picturesque charm of the place is to last. Its history is



a history of the past. Among the treasures of the museum in the Hotel de Ville, and much more in the *Musée Lapidaire* of St. Nicolas, and in the walls and towers of the little town, its own history is told in a sequence that whoso studies may read. The very soil is full still of records in stone; the spade of the peasant and the navy becomes at any moment the tool of the excavator; and there is a sense in which one seems nearer to the time when the Roman eagle passed under the gates of *Augustodunum* than to the reign of the bold Dukes of Burgundy, or to the later days of that siege of 1591, when the inhabitants of Autun, even the women, fought rather than submit to the generals of HENRI QUATRE. There is, indeed, very little of the Renaissance left in Autun. The exquisite little fountains of St. Lazare, in the cathedral *place*, stands almost alone, and even that is shorn of its second dome, surmounted by a pelican, which is now in the St. Nicolas museum.

We have not time to take the reader out of the town up the steep ways through the woods to Montjeu, seat of the family TALLEYRAND-PERIGORD, from the terraced parterres of whose château is one of the finest and most romantic views to be seen hereabout; or to plunge into the umbrageous ravines where the waters from the pure and exhaustless pools *de la Toison* and *de Paillard* come dashing down in joyful and noisy cascades. Nor can we turn aside to wander on the turf underneath the splendid Spanish chestnuts that sweep the ground with their great branches on the western slope of the hill behind the town or look out to see the cloud shadows flit over the plain, and rest lovingly about the crest of old Beuvray; or follow up the shining streams among the eastern hills, past many a quiet village with its château and old church, to pretty Lucenay l'Évêque, where of old the Bishop of Autun must always sleep one night before he entered the city to be consecrated. These and other pleasant things must go untold now, and we must leave but half related the attractions of Autun.

### THE STUDY OF ANCIENT BUILDINGS.\*

THE present age is distinguished by a tendency towards combination and union of effort in every department of human activity, whether commercial, literary, scientific, or ecclesiastical. In commerce limited liability companies are the order of the day. Science holds its periodical symposia in the great centres of our population, where observations are compared, and the most recent theories brought to the test of investigation and argument; and ecclesiastical affairs excite an interest never before witnessed, and create discussions not always of the most harmonious character. Archaeology has partaken of the same impulse, and has not been backward in the career of progress. The venerable parent Society of Antiquaries still pursues its quiet, useful course, undisturbed by the more excursive character of its offspring. The two metropolitan societies, the Association and the Institute, have for many years carried on a friendly rivalry in the investigation of our national antiquities, for which the increased facilities of travel in these modern days offer unexampled opportunities. In addition to these, there is not a county or a considerable town in the kingdom which has not its local society devoted to the same object. It might be thought from the number of these agencies at work, and the amount of interest taken in the study, that the subject had become pretty nearly exhausted, and that little room was left for further investigation; but it is not so. The inquiry extends over a vast field; the objects are numerous, and many of them, perhaps the most interesting, are either difficult of access, or not obvious, and require to be brought under notice by skilled experts who have made them a lifelong study. It may be asked, What is there in the investigation of ancient buildings—many of them in a state of hopeless ruin, or in heaps of rough stones, apparently meaningless, or in grass-grown mounds of earth now furrowed by the plough—to excite such an amount of fervour and enthusiasm? Our interests are all in the present and future—

Act, act in the living present . . .  
Let the dead past bury its dead.

This would indeed be a short-sighted and frigid philosophy, and would unsettle some of the noblest associations and impulses of which the human mind is capable. The present is only secure when it is well anchored in the past. The continuity of our institutions is the one great cause of their stability. The why and the wherefore of the present can only be ascertained by reference to the past. The motives, the feelings, the principles, and the prejudices of our own times are inherited from our fathers, and we, in turn, will have to hand them down, improved and elevated let us hope, to our successors. The law of mental association is a very important

factor in our habits of thought, and dictates a large portion of our ordinary course of life. If these associations connect us with what is noble and elevating in the past, they are surely worth entertaining and cherishing. The words of Dr. Johnson, when musing amidst the ruins of Iona, have often been quoted, but have lost none of their force, during the century which has since elapsed. He says:—"To abstract the mind from all local emotion would be impossible if it were endeavoured, and would be foolish if it were possible. Whatever withdraws us from the power of our senses, whatever makes the past, the distant, or the future predominate over the present, advances us in the dignity of thinking beings. . . . That man is little to be envied whose patriotism would not gain force upon the Plain of Marathon, or whose piety would not grow warmer among the ruins of Iona."

We have in the history of England a glorious inheritance. It is a wonderful story of development and progress—from darkness to light, from slavery to freedom, from ignorance to knowledge, from short-sighted folly to long-sighted wisdom—until it has become—

A land of settled government,  
A land of just and old renown,  
Where Freedom broadens slowly down  
From precedent to precedent.

We are justly proud of our English institutions, with their roots firmly fixed in the past, and their vigorous branches stretching forward into the unknown future; but history does not consist entirely of written documents, however valuable their contents may be. The surface of our country is studded with historical records written in stone, and brick, and earthworks, which bridge over the period between the ages before the dawn of written history, and connect them, without a break, with the living present. Written history without these—however eloquent—would be comparatively tame, spiritless, and uninteresting. What written history speaks more graphically or spans more completely the whole course of British events than the Tower of London, whether its origin be British, Roman, Saxon, or Norman? What reality it gives to the varied events which have taken place within its walls! How, in passing along its gloomy corridors, we seem to feel the presence of the illustrious departed! The memories of Sir Thomas More, Queen Anne Boleyn, Lady Jane Grey, Raleigh, Sidney, Russell, and a host of other worthies, seem to hover in the air, and bring to our senses memories of the past which no merely written documents could do. Or take Westminster Hall, with its feasts and coronations, and State trials of five hundred years ago; or the Abbey, with its stately architecture and its unparalleled series of national monuments. Imagine these swept away, and from whence could the loss be supplied? I mention these as being metropolitan and well known, but there are thousands of objects all over our country which have special associations with the past, or at all events form links in the chain which binds the remotest ages with the present. Going further back, the Roman remains—additional specimens of which are from time to time disinterred—give evidence supplementary to written history, which on this subject is very sparse; of a degree of cultivation, refinement, and general prosperity, which must have prevailed during several centuries, but of which no records are extant. The mining operations of the Romans, of which such extensive *débris* remain, the splendid roads which traversed the country in all directions, many of which are still in use; the great wall and stations of Hadrian, all manifest the application of engineering skill and capital, which could only have existed under a settled and wisely-administered Government. Further back still we come to the twilight of English history, which is ultimately lost in darkness. Here written evidence fails us, but we are not without a clue to guide us through the labyrinth to certain definite conclusions. The cromlechs, the stone circles, the dolmens, the barrows, the grave mounds, the pit dwellings, the primitive fortifications, supply in themselves no certain indications of the date of their construction, but they afford very strong evidence of the state of society, the manners and habits of those who erected them. Further back still, we are introduced into the habitations of the cave-dwellers, where man struggled for supremacy with the cave lion and the bear, and used the primitive weapons of bone and flint for the capture of the fish and deer on which he subsisted. Again we go back until we reach the drift period, where we have the earliest intimation of human life in its incipient stage of feeble progression. Now, reasoning from analogy and comparison, we are able to draw certain conclusions from what we find, and present with tolerable accuracy a picture of the forefathers of our race in their earliest development. These earlier stages belong more properly to what is called Palæontology, but it is difficult to draw the line where Archæology ends and Palæontology begins. As investigation goes forward the two will, of necessity, blend together and form a single department of inquiry. I think a very cursory glance will show that there is ample scope and verge enough for a union of effort devoted to one common end, the examination and elucidation of our relics of antiquity of all ages and of every description. This is the origin and the *raison-d'être* of the existence of the British Archæological Association, and the fruits of its labours are to be found in the thirty-eight volumes of its Transactions

\* Presidential address delivered by Sir James Picton at the meeting of the British Archæological Association on Monday evening.



I wish now to say a few words on the objects it has in view and the means of carrying them out. Its main purpose is to call attention to the precious relics of antiquity which remain amongst us, to facilitate their inspection and examination, to inquire into and illustrate their history where practicable, or otherwise to deduce from their own internal evidence the conclusions to which they lead; to encourage an intelligent study of our antiquities and of the art and science displayed in their construction; to place on record the results of the annual meetings and visits in the various localities; and last, but not least, to engage public sympathy in the guardianship and preservation from injury of these precious remains. Here is a wide field, in which all who take an interest in the objects of the Association may find a sphere of usefulness. I will just allude to the last—the preservation from injury, or, it may be, effacement. Many valuable objects, especially of the prehistoric character, have been, and still are, consigned to destruction through simple ignorance of their value. I will give one instance in which interference of the kind I have mentioned proved successful. One of the finest Danish monuments in the kingdom, the Great Stone of Thor, at Thurstanton, in Cheshire, was recently doomed to destruction, the monument to be destroyed and the land enclosed and built over. Public attention was called to the subject by a member of this Association, and the ultimate result has been that the stone has been preserved, and a reserve of forty-five acres round it has been dedicated to the public as a recreation-ground. Much may be done by keeping the public alive to the importance of preserving our national monuments. There is on the whole a desire to do what is right and proper in the matter. All that is wanted is to enlighten the public mind, and to point out in what the interest consists.

This leads to another vexed question, which has raised considerable discussion, not unfrequently conducted with unnecessary warmth, and even violence. I mean the so-called restoration of our ancient buildings, especially churches. The revival of mediæval architecture within the last fifty years, concurrently with what is called the Oxford ecclesiastical movement, drew attention, especially amongst the clergy, to the neglected and dilapidated state of our churches in some instances, and in others to their degradation and disfigurement by the interpolation of galleries, box pews, and rebuildings in an altogether unworthy style. Considerable zeal was manifested in improving this state of things by removing the excrescences and endeavouring to restore the buildings to their original condition. Zeal, however, is not always accompanied by sufficient knowledge and wisdom, and hence it has too frequently happened that the restoration has resulted in an error of the opposite kind, and in the attempt to reproduce a specimen of pure mediæval architecture, all the flavour of antiquity has been done away, and the residuum has become a raw, cold, staring building, reminding us rather of the modern contractor than of the hoary freemason of old. Sentiment has much to do with our appreciation of antiquity. We like to feel that these are the very chisel strokes of the ancient mason, that these are the *ipsissima saxa* which he laid. Here is the mason's mark cut with his own hand. There are the tiles worn into depressions by the pacing of the priest to and from the altar. Father Time comes with gentle hand, and tints the surface with weather stains, and here and there chips off a corner or rounds an angle; but he imparts a mellowness and flavour which give a wonderful charm, and carry us back through the distant ages, when we can realise in imagination the original state of the work. Then comes the half-informed restorer, clergyman, probably, fresh from the Ecclesiological Society, full of his notions about parvies, and rood lofts, and credence tables, and sedilia. Down go the pews and galleries, which none will regret. New tracery is put in the windows; the walls are scraped and chiselled until the ancient surface is all gone. Minton's tiles are laid down in the chancel, and a wonderfully sculptured reredos is placed above the altar table. He contemplates his work of destruction with smiling complacency, while the grieved antiquary can but sigh like the Jews when they saw the second temple and compared it with the first.

Matters of this kind have been bad enough in England, but they have been still worse on the Continent. It is pitiable to see the fine old Romanesque churches in Cologne, fraught with the hoary antiquity of a thousand years, mellowed and tinted by time, now scraped, chiselled, and pointed up to such a degree that they look as if the builder had just received a certificate for the payment of his last instalment. Much mischief has been done, but there are still many fine buildings which have hitherto escaped the ravages of the restorer. It is to be hoped that all who have a true reverence for antiquity will lend their aid to prevent all needless desecration.

The true principle of restoration is this—Where an unsightly excrescence has been introduced, remove it. Where a stone is decayed, replace it. Where the walls are covered with whitewash, clean them down. If tracery is broken match it with new of similar character, but spare the antique surface. Do not touch the evidence which time has recorded of the days gone by. I say nothing of buildings in ruins, or in danger, which of course must be rebuilt in the style best suited to the purpose.

Not the least pleasing feature in these annual gatherings is the

social intercourse thus promoted and encouraged. The association and mingling of like-minded persons having a pursuit in common is always agreeable, but this is greatly enhanced when the object in view is one which recommends itself by its connection with our historical studies, our patriotic feelings, our love of Nature, our pursuit of knowledge. We here renew our friendships, compare notes, report progress, and if in this ever-changing scene some are removed, others succeed to fill their places; and thus the flame is kept alive by the torch being handed on from generation to generation. Not the least pleasing feature is the presence of the fair sex, who add a charm and give a zest to our proceedings; and whose intelligent appreciation of the value of our antiquities may lend important aid towards their preservation. The history of the proceedings of this Association, as exhibited in its published volumes, is fraught with interest. My connection with it is not of very long standing, but I recall with pleasure those meetings which I have been privileged to attend. Last year we visited Worcestershire, under the presidency of the Rev. Lord Alwyn Compton, who gave us a most hospitable reception, and who conducted us with natural pride over the grand cathedral which now dominates over the Severn in all its pristine magnificence. Unfortunately, the heavens did not smile upon us in the manner to which we have been accustomed, and many of our excursions resembled explorations after the deluge. However, mutual sympathy and forbearance kept us alive, and a very enjoyable week was spent in spite of the weather. One great advantage and source of enjoyment in these annual meetings is the facilities which are offered for visiting places not usually open to the public, and the discovery of others little known or difficult of access, and it must be said that almost universally the utmost courtesy is shown and every opportunity given for the explorations of the visitors. Honourable mention especially is due to the clergy for the intelligent information furnished respecting their churches, and to their families for the kindness with which we have been uniformly welcomed. In 1880 we made Devizes our headquarters, and explored the wonderful archaeological remains of Wiltshire under the auspices of Earl Nelson, of whom it is only bare justice to say that he was one of the best presidents that ever conducted the business of the Association. In 1879 Yarmouth, under the presidency of Lord Waveney, was our centre, from whence we radiated in all directions amongst scenes of the highest archaeological interest. Every county has its own peculiarities and special objects of attraction. Whilst Wiltshire is peculiarly rich in prehistoric antiquities, such as Stonehenge, Avebury, &c., Norfolk and Suffolk stand pre-eminent for their beautiful and grand mediæval churches, which throw considerable light on some historical questions. In 1878 the Fen country was the scene of our operations, Wisbeach being the centre, and the Earl of Hardwicke our President. Here the scenery and the associations were of an entirely different character. The grand embankments of the Romans, and the mediæval history of the small seaports, carried back our inquiries into several successive phases of our national life. I need not expatiate on these. Are they not written in the Book of the Chronicles of our Association? Farther back than these I cannot personally go. The previous meetings are to me prehistoric and mythical, but

Vixere fortes ante Agamemnona multi.

I have no doubt the silver trumpet of our worthy secretary sounded in tones quite as inspiring, and that the meetings were quite as genial and interesting, as those with which I have had the honour of being connected.

And now, before I close, let me say a few words in anticipation of the events of the coming week. We have a varied programme before us, calculated to excite high expectations. As in a feast of another kind there can be no harm in conning the *menu* before the banquet is served. The West of England is not excelled in interest by any other quarter of the United Kingdom. It was for long the battle-ground between the retiring Celts and the advancing Saxons, and its subsequent history is connected with many striking and important events. Devonshire ranks second in size of the counties of England, and yields to none in fruitfulness and beauty. Its undulating surface, its deep combs and winding valleys, its rural lanes, fringed with luxuriant hedges glowing with the richest colours, present peculiar features, unequalled of their kind elsewhere. The tribe of the Damnonii, in whose occupation we find it in the earliest notices of history, were probably allied to the Belgæ, who were located to the eastward. They were probably not the aboriginal inhabitants, whose relics are found in the caves, but an immigration from the opposite coast of Gaul. We trace their memory to a limited extent in the names of most of the rivers—the Avon, the Exe, the Teign, the Taw, the Tamar, the Plym, &c.—and in a few place names, as Clovelly, Ilfracombe, and in the tors which dot the country. It is rather a singular fact, arising out of the circumstances of the history, that east of the Tamar Celtic names are sparse and few; west of that river they predominate to a large extent. Under the Roman dominion we know there were important stations in several parts of the county. Isea Damniorum, now Exeter, was a provincial capital from which radiated high roads in every direction. Such place names as Ilchester, Exeter, Stratton, bear unmistakable marks of Roman occupation. The submission of the Damnonii to Roman sway, compared with the sturdy resistance of the Cornwealtras or Cornubii, rendered the



district an easy conquest for the West Saxons under Cerdic, about the beginning of the sixth century. That the Saxon settlement was thorough and complete is evident from the almost entire prevalence of Saxon names in the towns and villages. The ninth century witnessed continual ravages of the south coast by the Danes or Northmen, but their permanent settlements were not extensive. Such names as Tot-ness, Hope-ness, Start Point, and Hoe indicate their presence. In the subsequent history of our country the men of Devon have always acted a prominent part. Some of our most distinguished naval heroes were natives of Devon, such as Sir Francis Drake, Sir John Hawkins, Sir Walter Raleigh; and Blake, though born just outside the county, was closely connected with it. The number of harbours at the mouths of the rivers along the coast of Devon encouraged the early devotion of the inhabitants to fishing and commerce, which was a very important factor in the early history of England. The noble, and almost unequalled, harbour of Plymouth early marked it out as a naval station; and since its incorporation in 1438 it has gradually grown up to its present importance as a dock and building-yard for the Royal Navy. We are promised what, I am sure, will be very interesting papers on "The Antiquity and Antiquities of Plymouth" and on "The Plymouth Municipal Records." Another paper on "Old Plymouth China" and on the county seals. On pre-historic subjects we are to have an article on "The Horlers, Trevethystone, and Duloe Stone Circle;" another on "A Group of Pre-historic Remains on Dartmoor." On mediæval architecture we shall have papers on the peculiarities of the churches of Devonshire, and on Plympton Castle and churches. Connected with biography we shall have notices of Admiral Robert Blake, and of the family seat of the Raleighs; and on mediæval manners and customs are promised a paper on municipal life in the olden time. What shall I say of the daily excursions by rail and carriage and steamer? Should the weather prove propitious, they will be charming and delightful, exhilarating and inspiring, feasting the eyes and informing the mind; and even should Jupiter Pluvius empty his cisterns somewhat in excess, we will endeavour to bear the infliction with equanimity and resignation. If we each endeavour to do our part by cheerfulness, good temper, and mutual assistance, always obedient to the summons of the silver trumpet, and following the directions of our leaders, we shall find that the ways of the Association will be ways of pleasantness, and all its paths will be paths of peace and delight.

#### PLYMOUTH MUNICIPAL RECORDS.\*

I CAN hardly imagine that any town in the further West of England can have possessed a more valuable series of records than Plymouth. The very importance of Plymouth, and the prominent part it has played, has been one of the chief causes of the disappearance of records that would be now almost invaluable. We cannot tell when Plymouth first became a borough. It was formally incorporated, as we now know it, by Act of Parliament 18th Henry VI. (1439-40); and from that date to the present day records of various kinds are extant. But there was a corporation, in part at least, of the town, long before that. The bailiffs and commonalty wrote to the King, May 31, 1289, concerning the preparation of a ship for his service. Richard the Tanner was Prepositus of Sutton (the elder name of Plymouth) in 1310; the seal of the commonalty of "Svttion syver Plymmvuth" occurs upon an extant deed of 1368; and whether as headmen, mayors, or portreeves, the names of about a score of chief burgesses of the town prior to the Act Charter have been recovered from casual mention in deeds and the like, though not an original municipal record of this date exists, and the oldest document in the possession of the corporation is a conveyance of a messuage in Old Town, dated 1381. Whatever the origin of the municipality of Plymouth, the Crown had nothing to do with it until the incorporation of 1439-40. Edward II. proposed in 1319 to make it a free borough, but was resisted by the lords—the Prior of Plympton as owner of Sutton Prior, and the Valletorts as the owners of Sutton Vawter—and more than a century and a half elapsed before the town of Sutton Prior, the hamlet of Sutton Vawter, and the tithing of Sutton Raf were incorporated as the borough of Plymouth. At the date of that incorporation there must have been a body of municipal and other records of some importance, for there were various guilds also in existence—a Guild Merchant, the Guild of our Lady and St. George, and the Guild of Corpus Christi at least—but not one original paper or parchment remains, and only a few copies.

We are in much the same position with regard to the earlier records of the present Corporation. There is hardly an original document extant dating before 1486. In this year, however, commence the accounts of the Receivers of the Borough, which are practically complete from that period to the present time. Had I written this paper two years ago I should have had to lament the existence of a gap between 1570 and 1658; but in January 1881 there was found among the muniments of the Morshead family at

Widey Court, near Plymouth, a tattered volume, which on being shown to me was at once recognised as the "missing link." There is no evidence that it had been in the possession of the Corporation since the middle of the last century, but directly its identity was pointed out it was restored.

There are some other accounts of the end of the fifteenth century, chiefly relating to works connected with the Church of St. Andrew; but the most valuable records of this period are to be found in an old book, which someone seems to have kept as a kind of commonplace or day book for the entry of miscellaneous matters. This contains notices of the proceedings of Manor Courts, of the Borough and Pie Powder Courts, of inquests by Simon Carswell, coroner (whom I suspect to have been the writer), copies of various deeds, some of considerable interest and value; the earliest borough rental, commencing 6th Henry VII., precepts and warrants concerning the water of Sutton Pool, a very curious abstract in English of the Charter of Henry VI., and a copy of the earliest noted bylaws. Some of the entries in this book are as early as 38th Henry VI., and it contains the oldest series of contemporary records now in the possession of the Corporation.

Next in point of date to the books already mentioned, but first in importance, is the ancient "Town Ligger," a bulky volume in oak boards and tattered pigskin, long known by the name of the "Black Book." This is probably the new "lygger," for which, and writing therein all that was in the old, 20s. was paid in 1535-36. It commences "Jesus Christus. Liber maioris et Communitalis burgi de Plymouthe in Com. Devon." The earliest current entries refer to the year 1540, but it contains copies of the charters, and of a number of ancient documents of importance relating to the town, for which in most cases it is now the sole authority. The "Black Book" was evidently intended to be a repository of all matters of note relating to the commonalty—proclamations, bylaws, Acts of Parliament, guild orders, assessments, with lists of mayors and freemen, while eventually it came to be used also as a registry, in which deeds relating to private properties in the town were enrolled by the town clerk—no doubt duly fee'd—for safe keeping. All communications from the King or Court were not only to be entered "for the good gyding of the Towne," but every article in the "lygger" was to be read once a quarter or twice a year in the hall "for the good remembrance and good rule of the same to be hadde"—an order which it is impossible can ever have been literally obeyed. A very important feature of the "Black Book" is the fact that it became the custom to enter under each mayoralty brief memoranda of leading local and national events. The book continued to be used as a record of the mayoralties down to 1709, and its lists of freemen are continued to 1658. Without it much of the early history of Plymouth would be a complete blank, and one of its entries supplies the first clue to the disappearance of the older records. It notes that Plymouth had been burnt three times (by the French and Bretons) in 1377, 1400, and 1403; and under the mayoralty of Richard Hooper, 1548-9, it states that the town was assailed by the Western rebels for the restoration of Catholicism—"then was our stepell burnt with all the townes evydence in the same by Rebelles." All that seems to have been then preserved, with the exception of a few scattered documents, were the books in current use.

Next in importance to the "Black Book" is the "White Book"—a volume given to the town by John Ford, mayor in 1555, and used from 1560 down to 1754 for the entry of bylaws and orders of the "twelve and twenty-four"—the familiar names of the aldermen and councillors—and of the sessions. These orders are for the most part signed by those who made them. There are a number of letters from the Privy Council and various persons of note of the reign of Elizabeth still extant; but only a very small proportion of these which we know to have existed; and the number of important documents of this period that have disappeared must be very large.

I have so far said nothing about the charters. The oldest now in the possession of the Corporation is that of Mary (1st year), which is gorgeously if not handsomely illuminated. There are also charters of Elizabeth (43rd), James I. (12th), Charles I. (3rd), Charles II. (19th and 36th), and William III., the present governing charter of the town. Of the charters before Mary—those of Henry VI., Richard III., and Edward IV.—there are only copies. The originals probably perished either when the "stepell" was burnt by the rebels, or fell victims to the malice of a Totnes man who came down to Plymouth in 1601-2 and burnt a record chest in the Council chamber. The present charter chest dates from about this period. Here is the entry from the Receiver's accounts:—

Itm rec. of Nicholas Goodridge of Totnes mrchaunte vpon an agreement made between the Towne and him for an offence comitted by him the said Nicholas in burning of a cheste in the Councill Chamber wherein were containyd divers evidences and writings concerninge the Towne. Cld.

It is probably to this severely-punished piece of arson (the fine would be equivalent to nearly 600% now) that one William Jennens and John Warren, in the course of a suit with the Corporation, referred when they declared, about 1665, that the town records had been burnt some seventy years previously. From the early part

\* From a paper read by Mr. R. N. Worth at the meeting of the British Archaeological Association.



of the seventeenth century the various sets of current Corporation books are fairly complete, and there are a few of what may be termed the day-books, which it was the custom to destroy, with the vouchers generally, when they had been produced and examined at the annual audit. The most interesting volume of seventeenth century accounts is one which belonged to the Committee of Defence at the time of the siege of Plymouth by the Royalist party, containing a full statement of their expenditure from February 1644-5, January 1645-6 (the siege itself lasted with intervals over three years). Among other documents that may be noted are the original warrants for the "regulation" of the Corporation in 1662, and the entry in one of the books of the Borough Court of "all those who came into open Court," June 4, 1660, at the Restoration of Charles II., and declared "their humble acceptance of His Majesty's Gracious pardon." Very few of them, however, were able to satisfy the Commissioners of Regulation. The papers of the Borough Court, which came to an end in 1842, date back to the reign of Henry VII., but there are only a few of the older ones left. The Court Books now extant commence in 1636, and some of the volumes contain most quaint illustrations of the manners and customs of old Plymouth. There are some very curious entries respecting the style in which "conventicles" and their frequenters were dealt with under the second Charles and James. Among miscellaneous papers, as an illustration of the valuable bits of history that may turn up in odd and "scrappy" ways, I may mention that one found contains the name of Theodore Palæologus as resident in Old Town Ward, and assessed to the poor in a halfpenny per month. This "last descendant of the Greek Emperors of Constantinople" lies in Landulph Church. How he came to be buried there has never been clearly made out. It is one step towards the solution of the mystery, now that it is for the first time made public that he was a resident in Plymouth, and, to judge by the amount of his assessment, in comparatively humble circumstances.

### BUILDING MATERIALS COLLECTION.

**L**AST year a committee was appointed to examine the Structural Collection at South Kensington and report whether it should be maintained; and if so, in what direction it should be developed, and what specimens might with advantage be removed. The late Mr. G. E. Street, R.A., with Mr. Gregory, Mr. Abernethy, and Major Seddon, composed the committee.

In the report just published, the committee say:—We believe that the establishment of this collection has been of great value in many respects. As a notable instance of its results, we may refer to the improvement of terra-cotta for structural purposes; so far back as the year 1867, at the International Exhibition, Paris, the result of this development was such as to place English terra-cotta in the highest rank, thus giving to the architect and the builder a material whose plastic character before burning admitted of mouldings and enrichments being produced and multiplied at very small cost, while the improvements in the process of burning turned out these mouldings and enrichments not only harder than stone, but unchanged in form, and in true lines.

Other illustrations are to be found in the improvement of mosaic work of various sorts, in the enlarged application of ornamental tiles for different purposes, and in the use of earthenware, plain and coloured, for walls, ceilings, pillars, mouldings, and architectural enrichments, of all of which examples of great beauty are seen in various parts of the South Kensington Museum.

Referring to the more general uses of the structural collection, it may be considered a natural and necessary adjunct to the science classes of the Science and Art Department, more particularly to those which deal with building construction and the elements of architecture; and such a museum is of undoubted value for normal schools for training teachers, in so far as it enables them to make themselves acquainted with all the latest appliances as well as with the best and cheapest materials and forms of construction. Even without a direct connection with educational establishments, such a collection is of great value for general reference, while the exhibition of foreign building materials and foreign structural models ought to enlarge the views and improve the practice of our own manufacturers and workmen.

We are enabled to state, on the authority of Sir Frederick Bramwell, F.R.S., Chairman of the Executive Committee of the City and Guilds of London Institute for Technical Education, that in selecting South Kensington as the site of their central Institution, they were greatly influenced by the neighbourhood of the South Kensington collections. Sir Frederick Bramwell has intimated to us that he would be sorry to see the collection of building materials abandoned, that he is sure that, with certain modifications, it is a very desirable thing that the collection should continue, and that it will be one of great use.

Under all the circumstances of the case we have come to the conclusion that the maintenance of the structural collection at South Kensington is highly desirable on public grounds, and we strongly recommend my lords to sanction its maintenance, revision, and development. In its present condition we consider that the collection may with advantage be weeded by the removal of such specimens as may be out of date, and of some models

and objects which may not be of practical value. From the vicissitudes which have attended this collection, its frequent removals, and its present scattered condition, it is not in that order which is essential to its proper use, but its rearrangement cannot be effectively carried out until it is placed in a suitable set of rooms.

At the same time there is much to be done to bring the collection up to the present date, and make it thoroughly efficient as a standard for general reference, and as a complete series of illustrations for the technical classes; but we submit that the collection when placed in a proper condition would be of so much value in promoting technical knowledge, that any outlay necessary for this purpose would be greatly outweighed by the public advantage.

### AMATEUR ART DISPLAY AT MALVERN.

**A**N amateur art exhibition was opened last week at Malvern College by Earl Beauchamp. In the course of an address delivered on the occasion, the Earl said it would not be necessary for him either to trace the history of art in England or make any general observations on art. That was a subject which had become one of the commonplaces of conversation. It was said that in the days of Goldsmith the conversation generally ran upon Shakespeare, taste, and musical glasses. Nothing was now heard of the latter, and the whole of the conversation was frequently absorbed in taste. But he did not desire to touch upon burning questions, and should decline to raise the question as to what was the proper position of the sunflower in the realms of art. He would not attempt to dictate on a matter of such great consequence. Something might be said of the use of such exhibitions as these. So much had been done for the application of the principles of art to painting and to other work that many people, if not all, were more or less familiar with those principles. He thought that the bringing about of such an exhibition as this stimulated them to apply themselves more thoroughly to the study of those principles, knowing as they did that they were submitting their works to a larger sphere of criticism than would be met with simply in the drawing-room. Such an exhibition produced a certain amount of concentration of attention to the matter. It showed that very little success was met with in art or anything else without attention was thoroughly given to it. To be done well everything must be done with all one's might, and without these occasional incentives people did not pay so much care to the subject as they should.

### THE NATIONAL GALLERY LOAN BILL.

**A** BILL presented to Parliament by Earl Granville, intitled "An Act for enabling the Trustees and Director of the National Gallery to lend Works of Art to other Public Galleries in the United Kingdom," has just been printed.

The Bill proposes that any two or more of the trustees, together with the director of the National Gallery, present at any meeting specially assembled for the purpose by fourteen days' previous notice, may from time to time order that any pictures or works of art belonging to them or under their control, which in their opinion can be spared from the national collection, shall be lent to any public gallery authorised by this Act.

That any loan of pictures or works of art, in pursuance of this Act, shall be made for such time and subject to such conditions as any two or more of the said trustees, together with the director, present at any such meeting as aforesaid may determine; provided that any profits, which after payment of all expenses may be derived from any exhibition of pictures or works of art at any gallery to which a loan may be made under this Act, shall be devoted altogether to the promotion of science and art.

That pictures and works of art which have been acquired by the said trustees and director under any gift or bequest shall not be lent in pursuance of this Act until the expiration of fifteen years from the date at which such pictures or works of art came into the possession of such trustees and director; and where any such gift or bequest is made on condition that the articles so given or bequeathed should be kept together, or otherwise subject to a condition inconsistent with the same being lent, such pictures and works of art shall not be lent in pursuance of this Act until the expiration of twenty-five years from the date at which such pictures or works of art came into the possession of such trustees and director.

By the expression "public gallery" is meant any gallery in the United Kingdom belonging to or under the control of Government or of any municipal authority or of any society or body approved by any two or more of the said trustees of the National Gallery, together with the director.

By "municipal authority" is meant the Common Council of the City of London, the Metropolitan Board of Works, the town council of any municipal borough in England or Ireland, the town council or police commissioners of any royal burgh in Scotland, also any other local authority which may be approved by any two or more of the said trustees of the National Gallery, together with the director.



## ARTISTIC ASPIRATION IN DEVON.

IN opening the Amateur Art Exhibition last week in Exeter, the mayor, Mr. T. Andrew gave an address. In the course of it he said that it had been thought by the Committee that they would be unable to reproduce a collection equal to the one brought together last year, but he was pleased to say that this year the number of exhibitors and exhibits, and the quality of the work, had altogether surpassed their utmost expectations. This year they had 370 exhibitors, being 100 in excess of the number last year. The number of exhibits, as stated in the catalogue, was about 870, but there were various articles grouped together, bringing up the total number of articles shown to about 900, which was a very considerable advance over the number of last year, and he thought, on referring to the works which adorned the walls, they would come to the conclusion that they had greatly improved on the former exhibition.

At present, the Committee were in straitened circumstances, for although the rooms in which the exhibition was held were commodious, yet they were not what they should be for an exhibition of this nature; and therefore there was all the greater reason why the intention of the Committee to enlarge the museum should be speedily carried out, and he hoped that their efforts would receive the support of the public generally. The present arrangement of the collection in sections involved much labour, and it really became a question as to whether they should continue the present number of sections. It was for the public to express an opinion whether they should continue, as at present, to hold exhibitions of oil and water-colour paintings one year, and of pottery art work the next, as in this matter the Committee would be guided by public opinion.

Having referred to details, he desired to add a few words generally. It must be remembered that this was an Amateur Art Exhibition. They had not brought together the class of work to be found on the walls of the Royal Academy or on the walls of the Grosvenor Gallery. It was not a concentration of the works of the chief artists of the country. The exhibition was confined to local amateur artists; and, taking that into consideration, he thought they must come to the conclusion that the exhibition was a very respectable one. There were two or three exhibits the work of professional artists, but no more; and as this was an exhibition by amateurs they could congratulate themselves on its excellence. The desire of the Committee was to develop local art talent as much as possible, and thereby add to the roll of Devonshire worthies. In a very able paper, read before the Devonshire Association last year by Mr. Pycroft, it was stated that Devonshire occupied the enviable position of being the first county in England, so far as its number of first-class artists was concerned, with the exception of Middlesex, which really meant London, where would be centred the art aspirants, not only of this country, but of the whole world. Therefore, excepting London, they might say that Devonshire had for many generations past stood at the head of all the counties of England in respect to the number of her first-class artists. There were six of these who were of the highest order, as they would admit when they heard their names—Sir Joshua Reynolds, Sir C. Eastlake, Prout, Haydon, Northcote, and Solomon Hart. The works of these artists had been adjudged worthy of occupying prominent positions in the National Gallery. He might also say that among historical painters they had Brockadon, a Totnes man; and they might perhaps remember a famous work of his in the Crown Court at the Castle—*Susannah and the Elders*. There was also in the room in which they were met a work by John Cross, representing the burial of the Princes in the Tower. They also had Sir Charles Eastlake, a Plymouth man, and Director of the National Gallery. They had likewise C. R. Haydon, Hart, Jenkins, King, and Northcote. Among the Devonshire portrait-painters was James Gandy, after whom a street in Exeter had been named. Then they had Sir Joshua Reynolds, the king of portrait-painters, and one of whom England would always be proud, not only for his ability as an artist, but also for his scientific and artistic lectures, which did so much to educate the country in various ways. In addition they had Cosway, of Tiverton, an eminent miniature-painter, although he made a "little silly" of himself on many occasions. There was also Leakey, who greatly distinguished himself as a miniature-painter.

Among the artists remarkable for landscape-painting they had John Gendell, who formerly lived in the house in the Cathedral Yard known as "Mol's coffee-house." He believed that for twenty years or more Mr. Gendell exhibited at the Royal Academy, and his name would be long respected by every lover of art. They had also Thomas Mogford and F. B. Lee, and the two Traies, for whose works just now there was quite a rage. To those they might add, with considerable safety, the name of Wigdery. He questioned very much if any painter had done more to make the West of England known; and whatever might be the value of the work, there was certainly more sale for his pictures than for those of any other man. Then there was Williams, of Plymouth, about whose work there was a remarkable freshness and charm; Miss Grant, of Hillersden, who was an exhibitor there that day; and, with considerable pleasure, he would add Miss Harding, daughter

of a former mayor of the city. It was impossible to look at the picture, *Still Life*, sent by her, without coming to the conclusion that this lady was possessed of considerable power. There was one name which ought not to be forgotten on that occasion, a name which would ever be honoured by Englishmen, and one which Exonians would ever be proud of—he referred to Samuel Cousins, the great mezzotint engraver of the present day, many of whose works were to be seen on the walls of the adjoining room. The esteem in which Cousins was held was shown by the character of the work he was commissioned to execute. They were all proud of his name, and he had no doubt it would be an imperishable one so far as Devon and this country were concerned.

To say a few words on another department of art, viz., pottery. There could be no doubt that a considerable quantity was manufactured in this county during the Roman occupation, and he had no doubt that much which was termed Samian would turn out to be Devonian. He had seen many pieces dug up in Fore Street which he believed were manufactured in this part. During the time of Elizabeth this art was carried on in North Devon, chiefly, he believed, by means of the Fremington clays; and he was pleased to see that Barum ware was still much appreciated. It would also be remembered that for a very long period they had had a very excellent pottery on the Bovey Heathfield, and the ware from that pottery had been exceedingly esteemed, not only in England, but in the South of Europe, where art was much appreciated. All around the Mediterranean there had been an extensive sale for Bovey ware. Since attention had been given to the terra-cotta an interest had been given to china-painting. He believed the production of this was likely to considerably develop, and that china-painting might become one of the great industries of Devon. As they had lost some local industries by the march of science, they should make the best use of the opportunities which providence and science offered them in other directions. He might say that Devonshire was noticeable for its felspathic clays, and around the moors at the bases of the granite bosses there were large quantities of it. We had also flint, lead, and manganese, important requisites in the manufacture of pottery, and there was no reason why Devon should not take advantage of them. Why, he would ask, should Worcester stand pre-eminent when in Devonshire they were surrounded by art materials? The surface conformation of Devonshire was second to none in England. What could surpass Dartmoor, with its various Tors, still surrounded by what he might term *primaeva* nature? What could be more beautiful than the beautiful gorges and rock scenery of North Devon? What could surpass the inimitable beauty of South Devon? There was everything needed to develop artists, and if latent talent was only brought out there was no reason why employment might not be found for a large class of persons, and Devonshire become noted for its art products. The desire of the Committee was to make this exhibition an art centre, and he believed their efforts would be appreciated by the public generally.

## THE SITE OF THE NEW PUBLIC OFFICES.

THE protest signed by the Chairman of Committees, Lords Fortescue, De l'Isle and Dudley, and Stratheden, and lodged in the House of Lords against the Public Offices Site Bill, runs as follows:—"That they dissent because that which is known as the Parliament and Great George Street site has long been considered the proper one for the Admiralty and the War Office, and a considerable amount of property on it has been purchased by Government, and a large extent of public land left unprofitably vacant for many years on that account. Because the adoption of that site secures the widening of Parliament Street, with a continued frontage of public offices, as the approach to the Houses of Parliament and Westminster Abbey, which necessary widening is far from certain to be obtained in any other way, and certainly not with the same class of buildings. Because the adoption of that site will leave the Admiralty undisturbed as regards the members of the Board, its business and official documents, until the new buildings are finished, and allow the Paymaster-General also to remain in his present office. Because the present Bill only gets possession of the Spring Gardens property, unaccompanied by any plan of the manner in which the buildings to be erected on it are to be applied to the Admiralty and War Office respectively, or of their architecture and elevation, leaving it uncertain whether the site will afford sufficient accommodation for those two great offices, or how far the aspect of the Horse Guards and Parade may be deteriorated by the new buildings. Because if the Admiralty is transferred to a new site, the present Admiralty buildings will give the means of concentrating in an economical manner, in a most convenient situation, a number of small offices now scattered over the town at a great expense and inconvenience. Because the Bill is not sanctioned by the inquiry which took place in 1874 or the evidence taken in 1877. Because the scheme has been condemned by the Royal Institute of Architects, is unsupported by any similar authority, and has been brought forward in a manner which shows great indifference to the importance of securing the improvement of our capital in the construction of public buildings by a careful regard to their architecture and position."



## NOTES AND COMMENTS.

WE mentioned last week that the building committee of the proposed church on the West Cliff, Whitby, had suddenly rescinded the appointment of Mr. C. NOEL ARMFIELD as architect in favour of Mr. JOHNSON, of Newcastle. A letter had been received from Sir G. ELLIOT in which the writer, alluding to his promise of a site and 2,000*l.*, reminded the committee that they had forgotten the conditions attached to the gift, namely, that he should be consulted as to the appointment of the architect. In consequence of the receipt of this letter the extraordinary proceedings above mentioned—if any proceeding can be called extraordinary where the appointment of an architect is in question—took place. The question does not in any way turn upon the respective merits of Mr. ARMFIELD or Mr. JOHNSON, for both architects are known as designers of churches, but rather upon the relations between Sir GEORGE and the committee. At present a certain amount of vagueness hangs over the whole business. Assuming that Sir G. ELLIOT had “stipulated to be consulted,” people will ask if by that expression it was meant that Sir GEORGE was to have the appointment in his own hands, and that the committee were to have no voice in the matter? No public mention appears to have been made previously of Sir GEORGE ELLIOT’s reservation. It was merely stated that the plans of the building were to be submitted to him, which was a reasonable precaution. It is incomprehensible how a committee of business men could deliberate upon the appointment of an architect, although they were altogether without authority, and yet the expedition with which they nullified their own acts suggests that they have been blundering for several months. The case is another example of the free-and-easy way in which an architect can be victimised.

A LARGE number of members and visitors attended on occasion of the annual meeting of the London and Middlesex Archæological Society, which was held at Silchester on the 17th inst. Mr. F. G. HILTON PRICE, F.S.A., who had prepared an elaborate paper for the occasion, was unfortunately prevented from being present; his place, however, was supplied by Mr. JAMES PARKER, who conducted the party over the various points of interest. On the way to Silchester the old mansion of the “Vyne” was visited, and some notes on its history, written by the owner, Mr. C. W. CHUTE, were read by the Hon. Secretary: drawings of this interesting house can be found in Dollman’s “Analysis of Architecture.” The next session of the Society commences in November, and it can here be recorded that by the recent resignation of the Hon. Secretary, Mr. G. H. BIRCH, A.R.I.B.A., the members will have lost an able and a zealous worker for the Society.

THE forging of bank-notes has of late been carried to such perfection that the Bank of France has decided upon making a change in the design of its paper-money. The new model is designed by the painter BAUDRY and engraved by ROBERT. M. BAUDRY first of all sketched the note on a board 3 mètres long by 1½ high, and then, before confiding it to the engraver, had it reduced by photography to the ordinary size. The engraving, which was done by M. ROBERT on the premises of the Banque de France, lasted several weeks. Sixty millions of 100 franc notes of the new design will be issued towards the end of next October, after which all the old notes brought into the Bank or its branches will be destroyed.

AT the last session of the Council-General of the Department of the Seine a proposition was adopted to open a competition among artists for the decoration of the Salle des Mariages at the Mairie de Saint-Maur-les-Fossés. A sum of 1,800*l.* is to be placed at the disposal of the victor for the carrying out of his plans, while prizes of 80*l.* and 40*l.* respectively will be awarded to the second and third in the competition. To English readers this must seem a large amount to spend on the embellishment of a single room in the purely local mairie of a small district, but French public bodies, emanating from universal suffrage, are evidently becoming every day more inclined to vote money for the advancement of education and art, and their example might well be followed, if only on a small scale, by the municipal authorities of Great Britain.

THE French War Offices are now being considerably enlarged. On the Rue de l’Université side, new buildings, occupying a space of 60 mètres in frontage, by about the same in depth, are now in course of construction, and when these and some other smaller additions are complete, the War Ministry will occupy the whole of the large space bounded by the Boulevard Saint-Germain, the Rue Solferino, the Rue Saint-Dominique, the Rue de l’Université, and the public gardens of the Rue de Bourgogne.

NOTWITHSTANDING that upwards of 1,100 new buildings are now being erected in Paris, house rents are rising every day. An association of capitalists has purchased several large plots of ground in the Trocadéro quarter with a view to the erection of a different class of dwelling-house to anything yet tried in Paris. These buildings, the architect of which is M. FRONQUOIS, will occupy an intermediate position between the private mansion (*hôtel particulier*) and the ordinary building let out in unfurnished suites of apartments, with the view—so runs the prospectus of the owners—of affording to rich tenants all the luxury, comfort, and convenience of a high-class private house without being obliged to lock up a large capital. These buildings will contain only basement, ground-floor, and two storeys, so that the various floors can be made much loftier than is usual; thus the rooms on the *rez-de-chaussée* will be no less than 5 mètres in height, and those on the others 4 mètres, while each storey will be built with large bay windows, a thing unknown in ordinary Paris houses. There will be but one tenant on each floor, and some idea may be obtained of the present scale of rents in the French capital from the fact that these flats are expected to be let easily at from 18,000 to 25,000 francs apiece. Another innovation will be made in providing servants’ bedrooms on each floor within the apartment of their employer. At present in all large buildings the domestics of both sexes and of all the various tenants are obliged to sleep in garrets on the fifth or sixth storey, opening sometimes twelve or fifteen of them on to the same corridor.

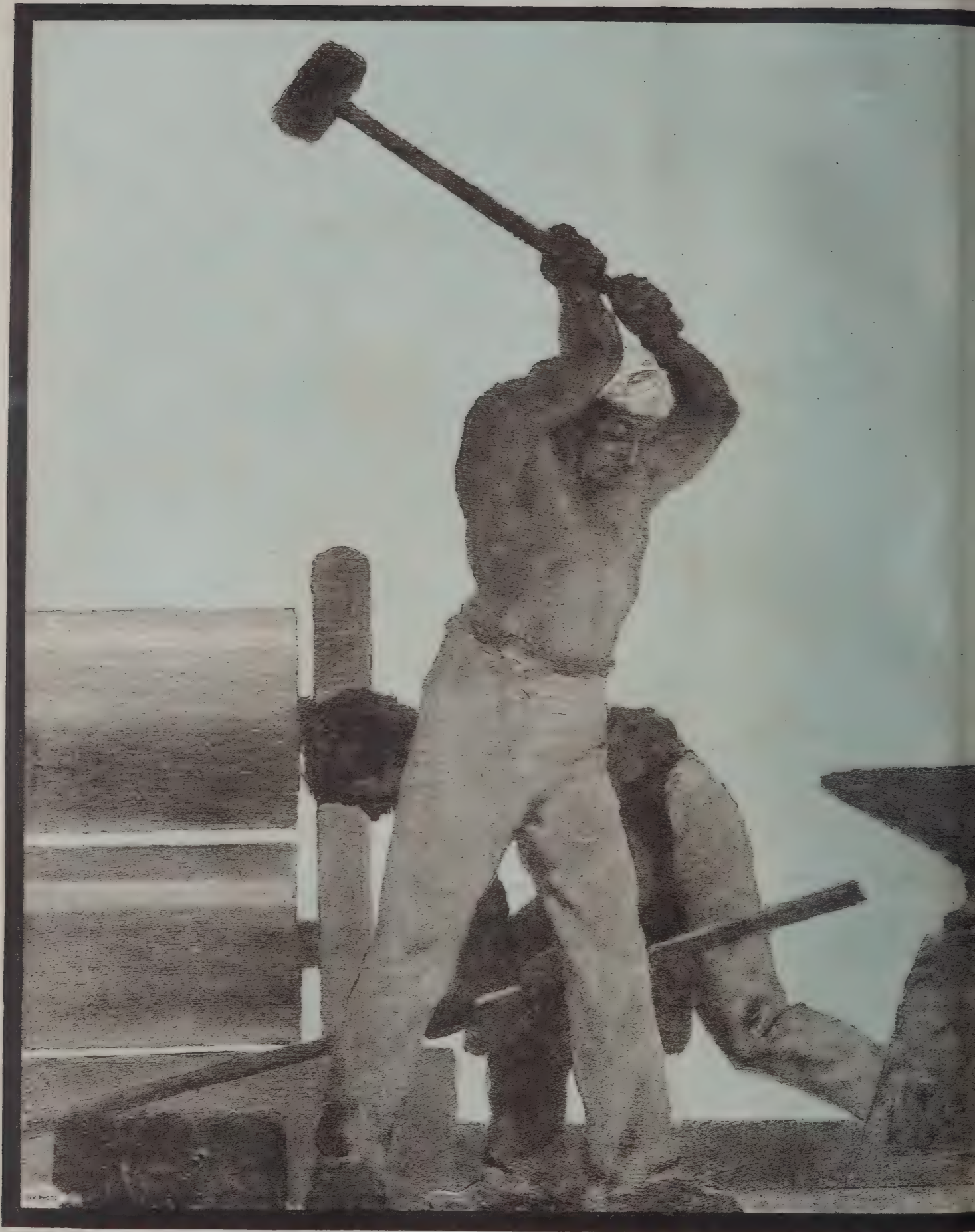
IN connection with the passing of the Ancient Monuments Bill a correspondent remarks that in the list of monuments to be protected none of the ancient monuments in Lancashire are included. “It seems to me,” he says, “from a comparatively recent visit made to the spot, that the so-called Druid’s Circle on the top of Chetham’s Close, Turton, near Bolton, is quite worth protection. The circle was nearly complete, but one of the stones composing it had recently been smashed by Vandal hands. I believe there is quite as much reason for calling these Druidical remains as most others. Then there is the Roman road embankment in the Fylde district, and some tumuli called *lowes* exist west of Whalley, which are said to mark the site of a great battle in Saxon times. There is the tumulus at Penwortham, and I have no doubt others in the county, which are worth a paternal protecting hand to pass them on safely down to posterity.”

A PARTY of the archæological section of the Birmingham and Midland Institute were on Saturday conducted for a ramble by Mr. J. A. COSSINS, the hon. secretary, from Salford Priors to Abbot’s Salford, Norton, and Harvington. Harvington Hall, at Abbot’s Salford, was visited—a large, rambling, seventeenth-century mansion, once the seat of the CLARKE family. The mansion, though of rather poor Jacobean architecture, with coarse details, is an imposing and picturesque mass, the view from the court being especially fine. At Norton, a pretty village, with many half-timbered houses, there is a small church of the fourteenth century. The north transept forms a well-preserved mortuary chapel of the BIGG and CRAVEN families, containing imposing monuments of the sixteenth and seventeenth centuries, with recumbent and kneeling alabaster effigies and quaint inscriptions. Military trophies and banners hang from the walls and ceilings. The reading-desk is a great curiosity, and belonged originally to the Abbey of Evesham. At Harvington the church is chiefly of the fourteenth century, without aisles. It contains some good traceried windows; but the tower is of the greatest interest, being of early Norman construction, with double belfry lights, divided by a small column. The walls, of extreme thickness, and the wide-spreading base, are both evidences of great antiquity. Many interesting half-timbered houses and picturesque bits were found in this pleasant village.









*Full Page Illustration*

# METAL

BY M. JUL

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DIDIER.

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of the London Library*













DESIGN FOR A CASINO OR CLUB

BY J. HOWARD



May 26<sup>th</sup> 1882.



Royal Academy  
Gold Medal  
Awarded to James Howard Ince,  
Design for a Casino  
Perspective View

FOR AN INLAND WATERING PLACE.  
INCE, ARCHT

J. H. H. 1882. J. H. H. 1882. J. H. H. 1882.







## ILLUSTRATIONS.

AGRICULTURE, DECORATIVE FRIEZE: METALLURGY.

ROYAL ACADEMY GOLD MEDAL DESIGN: A CASINO.

WE publish this week the perspective view of the design, by Mr. JAMES HOWARD INCE, to which the Gold Medal of the Royal Academy and a travelling studentship of 200*l.* were awarded. The subject is a casino or club for an inland watering-place, the accommodation required being a large assembly or concert hall, with open arcades or balconies, a small theatre, café, dining, reading, smoking, billiard, and card rooms, with the necessary offices; the building site being limited to 200 feet by 150 feet, with a garden or entrance-court in front 100 feet deep, showing a fountain. The conditions required all the work to be done in the Academy within six weeks, between the hours of 9 and 5.

Mr. INCE places his rooms as much as possible on the ground floor, prominence being given to the great hall, which opens on to a terrace, and from the galleries on to a wide balcony, whilst extra seats are afforded by a second end gallery over the card-rooms on the first floor, for which a special staircase is provided, besides the turret stair. But the most characteristic feature, as will be seen by the section and plan, is the open-air café, round which the buildings are grouped. It should, however, be borne in mind, that this is not only a design for a casino, but also for an academic prize, demanding a certain severity and dignity of effect—two conditions not strictly compatible.

The design was among the architectural drawings exhibited at the Royal Academy this year.

## BRITISH ARCHÆOLOGICAL ASSOCIATION.

THE annual congress of this Association opened at Plymouth on Monday, the members being received by the Mayor at the Guildhall. In welcoming the Association, the Mayor, Mr. Burnard, said they had formed a high estimate of the important researches which formed the special features of the studies of the Association, and anticipated from the programme drawn up that a rich harvest would be reaped.

Mr. T. Morgan, F.S.A., in responding, said that unfortunately the Duke of Somerset was prevented from presiding by illness, but that Sir James Picton had kindly come down to take his place. The series of historical windows in the hall having been inspected, as also the Corporation plate and insignia, a paper on the "Borough Records" \* was read by Mr. R. N. Worth, F.G.S. In the afternoon various buildings of interest in the town were visited, the first being the church of St. Andrew, rebuilt in the Perpendicular period.

## Church of St. Andrew and Charles Church.

Mr. Worth described the church as being the mother-church, not only of Plymouth, but of the neighbouring parishes. Recent researches had enabled him to gather information which threw light on the long-debated relation of the adjacent abbey to the church. There was evidence that it was not an abbey at all, but the old "prysten" or clergy-house of the town. Rent was paid to the Corporation for the "prysten-house" in the reign of Henry VI.; and at a much later date, early in the sixteenth century, there was a record of a grant by the Corporation to "Sir" Thomas Flyte, charity priest of the "prysten-house," for life, in consideration of his outlay in repairing the kitchen.

Mr. Loftus Brock, F.S.A., said he had come upon an old record which referred to a subterranean passage under the church. There was no doubt that this passage led into a crypt, and that crypt led into the clergy-house. Mr. Brock also referred to the fact that the recorded history of the church tallied very badly with the architecture. This was the common characteristic of Devonshire churches. There was, too, the same remarkable similarity to the mouldings which ran through the churches in the county, the rough carvings being the result of the use of granite.

After inspection of the abbey, Charles Church was visited. Few examples of post-Reformation Gothic buildings, Mr. Brock said, existed, and this was one of the finest in the kingdom. Some of its features seemed to have been taken by the architect from the church of St. Andrew and the cathedral at Exeter; it was also an illustration of how a love of the Gothic style had lingered in the country.

## The Old Dominican Monastery.

The old Dominican Monastery in Southside Street, now used as a distillery, was next visited. On the way thither a house at the corner of Love and Buckwell streets was pointed out as the site of the residence of Sir Francis Drake, evidence of his occupancy having only come to light within the past few weeks. No trace,

however, remained of the original house. Having entered the distillery Mr. Worth said there could be no doubt they were gathered within the walls of the house of the Blackfriars of Plymouth (the only habitable remnant of their religious homes), though all that was really known about it might be put in half a dozen lines. After the Dominicans were ejected it came in to the hands of the Corporation, who long used it as the town Marshalsea. In 1672 it became the first meeting-place of the Plymouth Nonconformists after Bartholomew, under Nicholas Sherwill; and later it was occupied by a congregation of Huguenots. For nearly a century it had been a distillery. What remains of the refectory is so perfect structurally that it could be restored to its pristine condition without difficulty. Mr. Brock called attention to the singular beauty of the roof, the design of which he hoped to see reproduced. They had only a fragment of the monastery, but it was a very interesting fragment—one of the most interesting in its way he had ever visited.

A typical Elizabethan house was afterwards pointed out by Mr. Worth, in Notte Street. While they had lost within a very few years nearly all their old landmarks—dozens of picturesque gabled houses, and the stately quadrangle once visited by Katharine of Arragon, and Palace Court; this finest of all their domestic examples, he was glad to say, was in hands that would guard it heedfully. Its owners, Messrs. Bulteel & Co., of the Naval Bank, not only intended to preserve it with all care, but were about to complete the façade on each side with buildings of kindred character.

A short visit was also paid to the Cottonian Library.

After the dinner Sir James Picton delivered the presidential address,\* which concluded the proceedings of the first day.

On Tuesday a visit was paid to Buckland Abbey, in the neighbourhood of Tavistock.

## Buckland Abbey.

Approaching the Abbey by an avenue of trees, the barn, a substantially-built structure, about 180 feet long, with buttressed walls and high-pitched roof, was first reached. Mr. Brock described it as one of the best features of the ancient buildings, being the least unaltered. The church and other monastic buildings were all interfered with by buildings of a later date, while every stone of the barn seemed to be original. The building was probably older than the foundation of the Abbey. He attributed it to the close of the fourteenth century, the buildings of the Abbey being seventy or eighty years earlier. The roof of this barn was original, and there appeared in it no sign of work of a later date. The plan of the barn was usual for that of a monastery barn—a long nave with a transept which formed the entrance. They had evidence in this spacious building of what good farmers the old monks were.

Leaving the barn, the party proceeded to the Abbey, or rather what remains of it. Since the days of Elizabeth, by whom it was given to Sir Francis Drake, the building has been turned into a dwelling-house. It still belongs to the Drake family.

Mr. Brock, who here read a paper, said it was seldom that they had the advantage of inspecting the remains of so varied a number of the houses of the religious orders once so numerous in our land as during their present congress. At Tavistock they would see the remains of the older order of Benedictines; Plympton was for Austin Canons; and at Tor Abbey they would see the site of a Norbetine or Premonstratensian house, one of the so-called Reformed Orders, placed away from the haunts of men. Here at Buckland the site plainly showed, in its low valley beside the stream, that they were on the site of an abbey of Cistercians. It had been founded by Amicia, the wife of William Earl of Albemarle. The site, acquired from her daughter Isabella, was confirmed to the monks by King Edward I. in 1275, and she signed the foundation-deed in 1280. The monks for the new colony were brought from Quarr Abbey, in the Isle of Wight. The dates showed it to be one of the latest foundations in England; and beyond the record of its foundation and dissolution there was little to say of its history. This was not to be wondered at when they considered the nature of the order and its position, far away, excepting the few contiguous villages, from any large centre of human life. It was curious, in relation to the churches of the Cistercian Order, that hardly one was now used for divine service. Wreck and ruin had fallen on many a fair building of the other orders, but yet many were retained at the Dissolution. This was doubtless because the sites were still away from the population in the sixteenth century almost as much as at the time of the foundation, none being wanted for use, as churches were demolished for the sake of the material only. Here at Buckland was a curious and unusual example of its retention. While destruction has fallen on the domestic buildings, which were in other places so frequently retained, here the church was kept standing, and was converted into a dwelling-house. They were within it now. The outer walls were for the most part those of the sacred fabric, and no doubt they were parts of the building as originally erected. The plan was peculiar for a Cistercian church. It consisted of a spacious nave, which had no aisles, and had never had any. A low central tower, which was still intact at

\* See page 127.

\* See page 125.



the crossing—if that term could be used—where there was but a single transept on the south side, and no north transept. There was also the usual short presbytery to the east, rather less than the usual square on plan, the breadth being a little more than the depth. On the north side a vestry or chapel extended up to the east end from the east line of the tower, and ended square with the east end. It was approached from the presbytery by a small square chamber at the west. The fine and once open arches of the tower could be traced here and there, where not covered over by the walls and floors of the modern house. They were pointed, and of three plainly chamfered orders, that to the presbytery being lower than the others. The original arrangements of the church were as anomalous as its present appropriation, and it was sufficient to show that the establishments of the Cistercians were not always on the same unvarying plan as some believed. The anomaly of the position of the cloisters and chapter-house, too, at Buckland was very apparent, for they had been on the cold and sunless north side of the church rather than on the south as is usual. There were many objects of interest of that date remaining. Apart from the well-known portrait of Sir Francis Drake, who lived there many years, there was a curious chimney-piece with his arms in the tower. It was later than his time, since it bore the date 1655. Much of the carving in the hall was said to have been brought from other old manor-houses—Durance and Callisham—by members of the Drake family. Over the fireplace was the date 1576.

#### Buckland Monachorum Church.

From the Abbey the party proceeded to the picturesque village of Buckland, every house of which, Sir James Picton pointed out, contained some traces of the hand of the mediæval builder, and among the mediæval features thus noticed pointed arch doorways and mullioned windows occurred, evidently brought from the Abbey or elsewhere. A visit being paid to the church, Mr. Brock remarked that the church was different from the usual type of Devonshire churches, from the fact that it had transepts both to the north and to the east, and that there was a chancel arch with a smaller chancel than the nave. The wooden fifteenth-century roof was particularly fine in character. In most of the county churches, the roof was continuous, but here it was different. The work here, too, was of an earlier date than that which the members had hitherto seen. It was entirely built of granite, and the traceries were deeper and more sharply defined than was usually found in Devonshire edifices. None could help being struck by the skilful way in which our ancestors worked the hard and impracticable granite. It was here treated as we should now treat Bath stone, whilst the builders had taken advantage of the huge blocks, the pillars being over 12 feet from capital to base. The original seats had been reverently removed, the original wood being preserved where possible. Especially worthy of observation was the beautiful groined roof of the chantry chapel. The granite was marvellously worked, and there was no reason to doubt the tradition at the abbey, that it was brought from the abbey itself. At any rate, there was some Perpendicular work at the abbey with which it would correspond. A curious feature in the chancel end of the church was the headway left in the right-hand supporting column of the chancel arch, which indicated the existence formerly of a rood loft. In these days, when it was the fashion to speak lightly of modern monuments, it was very gratifying to find in Buckland Church so magnificent a specimen of sculpture as that which commemorated the bravery of Elliot, Baron Heathfield, in holding Gibraltar against the overwhelming force of the enemy.

#### Stone Monuments.

On leaving the church a disagreeable change in the weather took place, and the rest of the programme was abandoned, and an early return was made to Plymouth by the main body. A few of the party, however, under the guidance of Mr. C. W. Dymond, F.S.A., reached the Clycpean Bridge at Blackabrook. This, Mr. Dymond explained, was one of the smallest bridges on Dartmoor, and one of a class of which there were several of considerable antiquity, without, however, there being any clue to the date. Stone monuments of a primitive age abounded in the district, but with few exceptions they were constructed with small materials and far from being imposing. These remains, like similar ones elsewhere, might be roughly divided into four classes—domestic, military, ceremonial, and sepulchral. Among the first are hut circles, well preserved specimens of which are those by Merivale Bridge. The most notable of the military was Grimspound. Of the ceremonial remains there were several near by, foremost among them being the avenues, which are the longest on Dartmoor. An inspection, however, of these could not be made.

At the evening meeting a paper was read by Sir James Picton, entitled "Glimpses of Municipal Life in the Olden Times," illustrating the progress of self-government and of the development of social and civic life, drawn from the very interesting records of the borough of Liverpool. These dated back to the incorporation of that borough by King John in 1207, and the charter of that monarch is now extant.

A second paper was then read by the Rev. W. S. Lach-Szyrma

on "Drake and his Voyage of Circumnavigation," shortly after which the proceedings of the day terminated.

On Wednesday the members made an excursion to Totnes, where a steamer conveyed them down the picturesque River Dart to Dartmouth. Here the church of St. Saviour was visited, and subsequently the Butter Walks, which is similar to the Rows at Chester. Dartmouth Castle having been visited, a return was made to Totnes, where the church, old guildhall, and castle were inspected. The party were entertained by the Mayor and Corporation, and return was made in the evening to Plymouth, which was reached soon after ten. The programme for Thursday comprised visits to Tavistock and the neighbourhood.

#### THE DURBAN TOWN HALL COMPETITION.

At a meeting of the Corporation of Durban, Natal, held on July 6, the first premium of 100*l.* was awarded to the set of drawings marked "???", by Mr. P. M. Dudgeon; and a second premium of 50*l.* to the drawings marked "Nemo," by Mr. Samuel Musgrave, A.R.I.B.A., of Trinity House Lane, Hull. The *Natal Mercury*, in criticising the plans previously to the above decision, says:—

"???" is a beautiful and effective design in pure Classic style. The drawings are tinted in sepia, a very appropriate manner of finishing them. Taking the design as a design, it should take the foremost rank in the competition, being a fine specimen of good architecture. Such a design, however, should be carried out in stone, otherwise its appearance and stability would not be such as to render it as complete a work of art as it appears on paper. The cost of building it in stone would unfortunately be far beyond the reach of the funds at the disposal of the Corporation. The arrangement on plan is, again, second to none, and far superior to most of the other designs. The architect appears, in fact, by some happy knack, to have placed every one of the most important chambers of the building in the most prominent position. It would be difficult to disparage the entirely tasteful and artistic *tout ensemble* which externally the design presents, or to make any feasible or sensible suggestion as to any alteration which would be an improvement in the arrangement of the interior. The architect furnishes five drawings, one of which is not shown on the walls of the Council-chamber, but that one indicates that the architect does not contemplate any elaborate ornamentation or finish inside the building. On the ground-floor are the Government offices, the Borough Solicitor's and Engineer's offices, and the Magistrates' Court-rooms, whilst the Chamber of Commerce and the Council-chamber are situated upstairs. This design will certainly claim the earnest consideration of the Council in their deliberations.

"Nemo" is a design in the Early English ecclesiastical style. It consists of a perspective drawing, two elevations, all of which are carefully executed plain line shaded drawings, and a ground and first floor plan. The main front, as in all the others of the competition, is to West Street, and is exactly centred in a clock tower of good and solid proportions, though not carried so high as the other towers of the drawings showing such features in the designs. The tower is surmounted by a bell-loft constructed in the Old English timber style, and this, although in good taste, so far as the style is concerned, cannot but meet with criticism as being too pronounced an adjunct of a church steeple to warrant its introduction on the tower of a town-hall. The architect is evidently a gentleman experienced in the study of ecclesiastical architecture, and although there is hardly any description of architecture which has more earnest admirers and champions than the Gothic, it is questionable if it is altogether advisable to strictly adhere to it in its entirety in many cases. The tower generally, however, is most pleasing, and is relieved and set off by turrets and a balustrading round the loft, which has a very good effect; but we shall be surprised if the popular verdict will not be to the effect that it "looks too churchy." This feature will certainly be considered as one of the least desirable in the design; but as even qualified professional opinion is likely to vary upon the point, we merely mention it without prejudice to the general excellence of the design *per se*. The adjoining building to the tower is slightly depressed, bringing out in bold relief the wings which are carried higher on either side, and in the centre, behind the tower, the roof of the great hall is visible, which breaks the outline in an effective, artistic manner. Round the West Street, Gardiner Street, and Church Street fronts there is a covered arcade, supported on Gothic brick columns and arches, and on this the first floor is carried over, projecting from the main walls of the lower storey, flush with the street line. This is a special feature of the design, and one which gives it a distinctive character in the competition. The windows are all pointed, mostly triple, with stone quoins and mullions. The building is apparently intended to be carried out principally in faced brickwork, relieved by stone or brick mouldings and dressings. The roofs, which cover a broad span, would appear less crude in construction than on paper. The depressed sections of the building on either side of the tower are recessed, which admits of balconies being intro-



duced over the arcade. The side elevations are well in unison with the front. There is very little to be complained of in the planning, economy of space being well combined with convenience and utility. On the ground floor is the great hall in the centre, carried up to and including the first floor, which shows a suggested gallery running all round the chamber, and retiring-rooms, &c., are provided beneath the orchestra and organ staging. On the left-hand side are situated the Government and Telegraph offices as stipulated, an area dividing the same to a great extent from the hall. On the right-hand side are the Town Clerk's and assistant Town Clerk's and private offices, also the Court-room, Magistrates' and Public offices and retiring-rooms—the latter being lighted from another area—and there is a vestibule, the principal entrance to the hall. On the first floor, left-hand side front, is the Council Chamber; at the back the Chamber of Commerce; also the Engineer's private office, Clerk's office, and Telegraph offices. On the left side is a long area by the Public Hall, the upper part of the Court-room, three rooms for the Town Solicitor's offices, the Mayor's room, Committee-room, and a corridor in front of the hall. The design is a very creditable one in every way, and one of those certain to be reserved for the final consideration of the Council, when, out of the ruck, the final selection will be reduced to a choice, perhaps between three or four. The drawings are uncoloured, a condition which the Council would have done well to have made compulsory on all the competitors. We are enabled to surmise from the remarks we overheard in the room, that one of the designs obtains special favour in the eyes of the gentlemen whose opinion will be of considerable moment in the final decision; but we may remain confident that such predilection, based on the beauty and artistic merit of the production, will not be unduly exercised, and that all the designs worthy will be freely and impartially considered on their various claims and merits when the council shall frame its final verdict.

### THE BRITISH ASSOCIATION.

THE fifty-second meeting of the British Association was opened at Southampton on Wednesday. Dr. Siemens delivered the presidential address, in the course of which he said: It can no longer be a matter of reasonable doubt, therefore, that electric lighting will take its place as a public illuminant, and that even though its cost should be found greater than that of gas, it will be preferred for the lighting of drawing-rooms and dining-rooms, theatres and concert-rooms, museums, churches, warehouses, showrooms, printing establishments, and factories, and also the cabins and engine-rooms of passenger steamers. In the cheaper and more powerful form of the arc light it has proved itself superior to any other illuminant for spreading artificial daylight over the large areas of harbours, railway stations, and the sites of public works. When placed within a holophote the electric lamp has already become a powerful auxiliary in effecting military operations both by sea and land. The electric light may be worked by natural sources of power, such as waterfalls, the tidal wave, or the wind, and it is conceivable that these may be utilised at considerable distances by means of metallic conductors. The advantages of the electric light and of the distribution of power by electricity have lately been recognised by the British Government, who have just passed a Bill through Parliament to facilitate the establishment of electrical conductors in towns, subject to certain regulating clauses to protect the interests of the public and of local authorities. Assuming the cost of electric light to be practically the same as gas, the preference for one or other will in each application be decided upon grounds of relative convenience, but I venture to think that gaslighting will hold its own as the poor man's friend. Gas is an institution of the utmost value to the artisan; it requires hardly any attention, is supplied upon regulated terms, and gives with what should be a cheerful light a genial warmth, which often saves the lighting of a fire. The time is, moreover, not far distant, I venture to think, when both rich and poor will largely resort to gas as the most convenient, the cleanest, and the cheapest of heating agents, and when raw coal will be seen only at the colliery or the gasworks. In all cases where the town to be supplied is within say thirty miles of the colliery, the gasworks may with advantage be planted at the mouth, or still better at the bottom, of the pit, whereby all haulage of fuel would be avoided, and the gas, in its ascent from the bottom of the colliery, would acquire an onward pressure sufficient probably to impel it to its destination. The possibility of transporting combustible gas through pipes for such a distance has been proved at Pittsburg, where natural gas from the oil district is used in large quantities. The quasi-monopoly so long enjoyed by gas companies has had the inevitable effect of checking progress. The introduction of the electric light has convinced gas managers and directors that such a policy is no longer tenable, but must give way to one of technical progress; new processes for cheapening the production and increasing the purity and illuminating power of gas are being fully discussed; and improved burners, rivaling the electric light in brilliancy, greet our eyes as we pass along our principal thoroughfares. The hurtful influence of smoke upon public health, the great personal discomfort to which it gives rise, and the vast expense it indirectly causes through the destruction

of our monuments, pictures, furniture, and apparel, are now being recognised, as is evinced by the success of recent smoke abatement exhibitions. The most effectual remedy would result from a general recognition of the fact that wherever smoke is produced fuel is being consumed wastefully, and that all our calorific effects, from the largest down to the domestic fire, can be realised as completely, and more economically, without allowing any of the fuel employed to reach the atmosphere unburnt. This most desirable result may be effected by the use of gas for all heating purposes, with or without the addition of coke or anthracite.

Speaking of engineering works, Dr. Siemens said:—The time allowed me is wholly insufficient to do justice to the great engineering works of the present day, and I must therefore limit myself to making a short allusion to a few only of the more remarkable enterprises. The great success, both technically and commercially, of the Suez Canal has stimulated M. de Lesseps to undertake a similar work of even more gigantic proportions—namely, the piercing of the Isthmus of Panama by a ship canal, 40 miles long, 50 yards wide on the surface, and 20 yards at the bottom, upon a dead level from sea to sea. The estimated cost of this work is 20,000,000*l.*, and more than this sum having been subscribed, it appears unlikely that political or climatic difficulties will stop M. de Lesseps in its speedy accomplishment. Through it China, Japan, and the whole of the Pacific Ocean will be brought to half their present distance, as measured by the length of voyage, and an impulse to navigation and to progress will thus be given which it will be difficult to over-estimate. Side by side with this gigantic work, Captain Eads, the successful improver of the Mississippi navigation, intends to erect his ship railway, to take the largest vessels, fully laden and equipped, from sea to sea, over a gigantic railway across the Isthmus of Tehuantepec, a distance of 95 miles. Whether or not M. de Lesseps will be successful also in carrying into effect the third great enterprise with which his name has been prominently connected, the flooding of the Tunis-Algerian Chotts, thereby re-establishing the Lake Tritonis of the ancients, with its verdure-clad shores, is a question which could only be decided upon the evidence of accurate surveys; but the beneficial influence of a large sheet of water within the African desert could hardly be matter of doubt.

It is with a feeling not unmixed with regret that I have to record the completion of a new Eddystone Lighthouse in substitution for the *chef-d'œuvre* of engineering erected by John Smeaton more than 100 years ago. The condemnation of that structure was not, however, the consequence of any fault of construction, but was caused by inroads of the sea upon the rock supporting it. The new lighthouse, designed and executed by Mr., now Sir James Douglass, engineer of Trinity House, has been erected in the incredibly short time of less than two years, and bids fair to be worthy of its famed predecessor. Its height above high water is 130 feet, as compared with 27 feet, the height of Telford's structure, which gives its powerful light a considerably increased range. The system originally suggested by Sir William Thomson some years ago, of distinguishing one light from another by flashes following at varied intervals, has been adopted by the Elder Brethren in this as in other recent lights in the modified form introduced by Dr. John Hopkinson, in which the principle is applied to revolving lights, so as to obtain a greater amount of light in the flash.

The geological difficulties which for some time threatened the accomplishment of the St. Gothard Tunnel have been happily overcome, and this second and most important sub-Alpine thoroughfare now connects the Italian railway system with that of Switzerland and the south of Germany, whereby Genoa will be constituted the shipping port for those parts. Whether we shall be able to connect the English with the French railway system by means of a tunnel below the English Channel is a question that appears dependent at this moment rather upon military and political than technical and financial considerations. The occurrence of a stratum of impervious grey chalk at a convenient depth below the bed of the Channel minimises the engineering difficulties in the way and must influence the financial question involved.

Whether the Channel Tunnel is constructed or not, the plan proposed some years ago by Mr. John Fowler, of connecting England and France by means of a ferry-boat capable of taking railway trains, would be a desideratum justified by the ever-increasing intercommunication between this and Continental countries. The public inconvenience arising through the obstruction to traffic by a sheet of water is well illustrated by the circumstance that both the estuaries of the Severn and of the Mersey are being undermined in order to connect the railway systems on the two sides, and that the Firth of Forth is about to be spanned by a bridge exceeding in grandeur anything as yet attempted by the engineer. The roadway of this bridge will stand 150 feet above high-water mark, and its two principal spans will measure a third of a statute mile each. Messrs. Fowler & Baker, the engineers to whom this great work has been entrusted, could hardly have accomplished their task without having recourse to steel for their material of construction, nor need the steel used be of the extra mild quality particularly applicable for naval structures to withstand collision, for, when such extreme toughness is not required, steel of very homogeneous quality can be produced, bearing a tensile strain double that of iron.



## THE INFLUENCE OF RACE ON ARCHÆOLOGY.

THE session of the Cymmrodorion Society, in connection with the National Eisteddfod, was opened on Monday at Denbigh by Dr. Richardson, of London, with an inaugural address on "Races of Man and Life on English Soil."

He commenced by saying that the races of men form the frictional surfaces by which, in natural collusion, the knowledge and wisdom which make life worth having are struck out. If one race having the same tastes, desires, hopes, traditions, language, arts, literature, and aptitudes were to become the exclusive inhabitants of the planet, it would become a Babel, and fall, probably, a prey to the lower untamed forms of animal life. He then proceeded to describe the races of men on English soil, relating his own researches on this subject. He next discussed the races in detail—the Saxon, the Celtic, the Jewish, and the Gipsy—as they exist amongst us at the present day. He defined the peculiarities of each race in respect to physical conformation, mental disposition, artistic tastes, perceptive and reasoning powers, &c. After these descriptions, in which the differences of the races were minutely detailed, Dr. Richardson pointed out that the different races were to a considerable extent distinguishable by their surnames. Thus the members of the Saxon race were most commonly known by names indicating trades, as Smith, Miller, Carpenter; or by a name denoting some substantial thing, as Wood, Stone, Hill; or by an office, as Judge, Sheriff, Warder; or by a town or place; or by a colour, as Black, White, Brown; or by a name with the word "son" as a suffix; or by a combination of terms, with the letters or term "ard" introduced, as in Rickardson or Richardson. The members of the Celtic race are more commonly known by a name indicating a quality, as Jolly, Merry, Gay; or by a name with a prefix, such as O in O'Neale, meaning the grandson of Neale; Mac, as in MacDougal, meaning the son of Dougal; ap, as in ap Rhys, ap Howell, ap Roger, ap Richard, names now often modified into Price, Powell, Prodger, and Pritchard; or again by putting a name in the genitive case with a Christian name, as David Williams, David son of Williams, a plan which the late eminent scholar Mark Antony Lower has shown to have been common in Wales; or by the affix de to a name, as in de Merveil-loux. The Jewish are more commonly known by original Jewish words, such as Moses, Solomon, Abraham; or by modifications of these, as Moss, Salmon, Brahm; or by Latin words, such as Magnus; or by borrowed names, such as Lawson and Lawrence. Very many of this race are known by the names of animals, as Lion, Wolf, Hare, Hart, Fox, and the like. The members of the gipsy race cannot be said strictly to have any distinct surname; but when they emerge from the nomadic state they are given to borrow or assume a few names for which apparently they have a special liking. To the gipsy race the author ascribed much more latent talent than is usually attributed to it.

Dr. Richardson next dwelt on the question of admixture of the races. In the admixed families, Saxon-Jewish, Celtic-Jewish, Saxon-Celtic, the dominant type may usually be read, the pigments or colouring substance of the eyes, the hair, the complexion, being as distinct as the mental peculiarities. The purest Saxon-Jewish family type is the blue eye and fair skin with dark brown hair, or the hazel eye with dark hair and fair skin. The purest Saxon-Celtic family type is the blue eye with ruddy complexion and golden hair. This in the young is the most beautiful of combinations. The Celtic-Jewish family type is very characteristic; the eyes hazel or amber-coloured, the hair rich brown or auburn, the complexion ruddy but a shade dark, the nose aquiline and exquisitely chiselled to features of Semitic cast, the tastes strong for music and for the pursuit of all that is pleasant in nature out of doors.

He then referred to the future of the three principal races as follows:—The three races—Saxon, Celtic, Semitic—in this day strive together, react on each other, and on the whole beneficially. The Saxon goes to the fringe of some new continent, carrying with him his other self, his lever, his mattock, spade, plough, axe, and other tool or engine. He cuts into the forest, he digs into the earth, he levels the roads, he builds rude houses, warm and comfortable enough for him if he be let alone; he sets up earthworks and forts; he plans docks, builds and mans ships; and does it all often out of what he finds on the spot, taking everything as if it were his own, and fighting the owner if he dares to interfere; crushing out all that comes in his way, yet not quarrelsome if he is allowed his own way. When he has made a rough holding, he lets the Celt join him on terms which he keeps the key of, and the Celt, with light heart and elastic mind, beautifies the place and makes it more human, builds the temple, the theatre, the mansion, lays out the garden, introduces the picture, the sculpture, improves and lightens the literature, lets in the light, the art, the beauty; in fact, furnishes the place and makes it happy. When Saxon and Celt have in their ways thus installed the community in comfort and position, in glides the Jew with his money bags, and "will you buy, will you buy, will you buy," becomes the ring of the street and the market. So commerce completes the whole.

Dr. Richardson concluded by eulogising the Eisteddfod, showing its influence upon the Welsh people during the past thirteen centuries, and said that the love of Eisteddfod was a striking characteristic of the people.



## Hexham Abbey Church.

SIR,—Your sense of fairness will, I trust, excuse me for troubling you with this. I hope also that, as an old subscriber to your journal, you will permit me to ask you for the first time for a little space in it to protest against the outrageous language reported in your last number (August 19, page 115), as having been used by Mr. Peacock about the restoration of Hexham Abbey Church.

He is reported as saying that, "Before leaving the church, he thought the party ought to express their indignation and disgust at the ignorance and ruffianism of the architect who had carried out the work of restoration. They had never seen anything half so revolting as what they had seen to-day, and he thought that, considering the amount of destruction wrought, they should not go away without expressing their strong feeling."

We all know the abuse to which architects have been subjected of late years, but I fail to remember anything equal in the way of vituperation to the above. I may mention that in the winter of 1860-61 I spent many weeks in making drawings of the abbey, and sections full-size of nearly every moulding in the transepts, choir, &c., and therefore I had ample opportunity of observing what had been done by the late Mr. Salvin and the late Mr. John Dobson, of Newcastle, and certainly nothing had been done but what was necessary. In fact, even the most rabid member of any archaeological society, or even of the Society for the Preservation of Ancient Buildings, could not have a greater veneration for the works of past times than the architects just named had.

I visited the abbey five years since, and I found that the works carried out since my previous visit by Mr. R. J. Johnson, of Newcastle, were, it is needless to say, quite as notable as those of his predecessors for the obvious endeavour to treat tenderly the remains of the past.

I am, sir, your obedient servant,

THOS. FARRER, A.R.I.B.A.

44 Wellington Street, Regent's Park, N.W.

August 23, 1882.

## Appointment of Quantity Surveyors, Fulham Infirmary.

SIR,—We were greatly surprised and annoyed to observe a paragraph in the last issue of your professional contemporaries to the effect that we offered to take out these quantities for *half per cent.*

This statement is *utterly untrue*, as we studiously avoided making *any* offer; and even had we been obliged to do so we should have thought it *infra dig.* to make an offer so far below the recognised scale of charges usually made by surveyors of standing.

Messrs. Quilter & Hardcastle followed the same course as ourselves, and did not mention terms; and it is a significant fact (which, perhaps, may be a useful hint to those surveyors who offered their services at such low charges) that after the number of applicants had been reduced to six, Messrs. Quilter & Hardcastle and ourselves were the only applicants who obtained *any* votes, each firm receiving five votes, the former obtaining the appointment by the *casting* vote of the chairman.

We shall feel obliged if you will publish this letter in your next issue.

Yours &c.,

MAUGHAN & CUXSON.

7 Westminster Chambers, London, S.W.:

Aug. 23, 1882.

## St. Paul's New Church, Swindon, Competition.

SIR,—In answer to the advertisement of the above, I called on Mr. West, and I found that Mr. Ferrey had built the church, but Mr. West declined to tell me why Mr. Ferrey was not to do the chancel, &c., now required. I visited the church, and to me it seemed a charming work—simple, very inexpensive, and effective in the extreme. I had a short interview only with Mr. West, and I came to the conclusion that I should not be justified in going in for that competition. I daresay some of your readers will be glad of my experience. I remain, sir, yours faithfully,

9 Argyll Street, W. : Aug. 23, 1882.

J. VACHER.

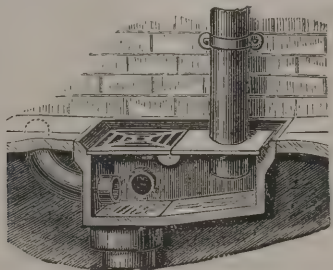
**The Old Tunnel at Naples**, known as the Grotto of Posilippo, has just received a rival. On August 15 the boring of the tramway tunnel under Posilippo was completed. This tunnel, so far as height and width are concerned, is the largest in Europe, being 30 feet wide and 36 feet high. The steam tramway which is to run through it will be finished before the end of the year, bringing Naples into direct and easy communication with Pozzuoli. There will be also a broad promenade path extending through the whole length of the tunnel.



## NOTES ON NOVELTIES.

## Bellman's Patent Gully.

IN entering the region of sanitary appliances Messrs. Bellman & Ivey, of Wigmore Street, commence a somewhat "new departure" from the class of productions with which their names have been so intimately associated. Not that this *détour* is calculated to detract from the prestige of the firm; on the contrary it will give them an opportunity of gaining fresh *clat*, as the article of which we are about to treat possesses considerable merit. The "Bellman" gully, the invention of the senior partner in the firm, and of which we offer an illustration, is of stoneware, and intended to carry off the rain water from the house, as well as through waste pipes, disconnecting the whole from the building so far as any contamination from the drain may be likely to accrue. It will be seen that it consists of an oblong vessel, its size being 16 inches by 8½



inches, by 7 inches deep. Over the bottom opening communicating with the trap to the drain is placed a grating, to prevent any pieces or foreign matter that may have escaped from sinks, &c., from entering the drain, and as the top grating is loose and large enough to obtain full access to the gully, it can be easily and readily cleared at any moment. The water from the roof passing direct into the gully, prevents splashing, and to a certain extent this pipe acts as a ventilator to pipes and trap. But a most important advantage the "Bellman" gully can claim over most others is that, by using a "Por" strap, it can always be fixed at right angles, as the trap can of course be turned in any direction to meet the drain. Thus a perfect water-seal is always obtained, for should the weather be very dry, and a deficiency of rain-water occur, the constant influx of water from the waste-pipes of the household will effectually secure this against any amount of evaporation, and the constant changing of the water, so to speak, will keep it comparatively fresh. It will be seen that the appliance is of a most simple yet effective character, and it has already received high encomiums from influential quarters. As the price at which it is offered is merely nominal, we expect to hear that it will shortly be very extensively adopted. We may add that the firm also manufacture single gullies on the same principle for sink wastes only, which with ordinary care must always secure a clean and clear sink.

## CHURCH BUILDING AND RESTORATION.

**Clipstone.**—The memorial-stones of a Wesleyan Chapel have been laid. The building, which is to accommodate 120 persons, will be of brick with stone dressings. Mr. A. Eastwood, of Warsop, is the builder, and Mr. Arthur Marshall, of Nottingham, the architect.

**Maldenmoreton.**—The parish church of St. Edmund has been reopened after partial restoration. The work has been carried out by Messrs. Atwood & Sons, builders, of Brailes, Shipton-on-Stour, under the direction of Mr. J. Piers St. Aubyn, architect, of the Temple.

**Biggleswade.**—The dedication-stone has been laid of a new church at Biggleswade. The new building will be of white and red brick with stone dressings, and will have a south aisle. The nave is 73 feet 10 inches by 35 feet 10 inches, and the chancel dimensions are 20 feet 6 inches by 20 feet. A vestry and organ chamber are provided for. Mr. A. W. Blomfield, of London, is the architect; Messrs. Page Bros., of Buckden, Hunts, the contractors. The contract price is about 3,000*l*.

**West Haddon.**—The Baptist chapel has been reopened after works of renovation. The works include new seating and new tile-flooring, as also the addition of a narthex. Mr. E. Sharman, of Wellingborough, is the architect, under whom the work has been executed by Mr. E. Bassford, builder, of Northampton.

**Kirbymoorside.**—The ancient church of Gillamoor, situated in a romantic part of the North York Moore, has been reopened after restoration. The church has been refitted, the ceiling and walls panelled and decorated in colour-work, the chancel screen redecorated, and a new oak spire, lead-covered, has been erected in place of the old bell-turret, which has been removed. The church contains an old Norman font, and the inscriptions on the bells testify to its ancient foundation. The work has been carried out under the direction of Mr. Temple Moor, architect.

**Bognor.**—A new church, dedicated to St. John, has been opened at Bognor. The church is built chiefly of flint and red brick, and consists of chancel, nave, aisles, and transept. The nave is seated with chairs for 1,000 persons. The architect is Mr. Blomfield.

**Ashton.**—A new Wesleyan chapel is being erected at Ashton, near Preston. The chapel will afford accommodation for 250 worshippers, and have a minister's vestry, large classroom, heating chamber, and other offices situated at the west end. Local contractors are carrying out the various works from the plans and under the directions of Mr. David Grant, architect, of Preston.

**Chatham.**—An appeal is being made for funds for the erection of a new church at Luton, Chatham. It is proposed to provide a church with 750 sittings, and the directors of the London and County Banking Company have given a site for the purpose. A sum of 1,500*l*. has been promised up to the present, and there is also a conditional offer of 1,000*l*. subject to the church being built in eight years' time.

**Cwmbach.**—A new church, dedicated to St. Mary Magdalene, has been opened at Cwmbach, Aberdare. The church, which is seated for 300 persons, has been erected from the designs of Mr. E. M. B. Vaughan, A.R.I.B.A., of Cardiff, at a cost of 940*l*., by Mr. John Morgan, builder, of Aberdare. The church has been built in a simple Gothic style of architecture, on a site secured for 999 years. It consists of a nave and apsidal chancel, where the choir is seated. The walls are of Penrhiwceiber stone with Bath stone dressings. The roof inside is open timbered.

## SCHOOL BUILDINGS.

**Stratford-on-Avon.**—The report of Mr. Robson, architect to the London School Board, on the ten sets of plans sent in in competition for the new schools, has been forwarded to the Stratford School Board. Messrs. Giles & Brookhouse, of Derby, whose plans stood first, were disqualified by reason of condition No. 8 being ignored, which provided that the proposed extensions of the buildings should be indicated on the plans. The first premium was awarded to Messrs. T. E. Streatfield and W. O. Milne, of London; the second to E. J. Etwell, of West Bromwich; and the third to George H. Cox, of Birmingham. The Board decided to employ Messrs. Streatfield & Milne; the premium of 25*l*. to merge into commission.

**Falmouth.**—The foundation-stone of a Congregational Sunday-school at Falmouth has been laid. The building has two entrance folding-doors in the centre leading into separate vestibules, forming an entrance each for boys and girls. The main school is 50 feet by 42 feet, and is lighted by a large window over the entrances, and a similar one at the other end. A gallery runs round three sides, with three classrooms on either side, 9 feet by 8 feet, reached from the vestibules by staircases. Light is obtained by small windows in clerestory. Beneath the main school are three large classrooms and lavatory and cloakroom. In the basement is the infant school. The late Mr. W. J. Halligey was the architect. The contractors are Messrs. Mitchell & Kitto, of Falmouth.

**Sowerby Bridge.**—The memorial-stones have been laid of a new Wesleyan Sunday school. The building is being erected from the designs of Mr. C. F. L. Horsfall, of Lord Street, Halifax. It will consist chiefly of one large assembly-room, to accommodate 700 scholars. The principal approaches will be from Bolton Brow. There will also be a side door from which there will be direct access to the old school, which is to be divided into classrooms. The cost of the new school and the alterations of the old school is estimated at about 2,000*l*.—1,800*l*. being the cost of the buildings, and the other 200*l*. being for furnishing. The contracts for the school have been let for 1,659*l*. to the following:—Masons, Messrs. John Turner & Sons, Sowerby Bridge; joiners, Messrs. Halstead Bros., Eastwood; slater and plasterer, Mr. George Hoyle, Sowerby; plumbers and heating apparatus, Messrs. Wm. Fox & Son, Bolton Brow, Sowerby Bridge; painting, Messrs. E. Whitehead & Son, Sowerby Bridge.

## NEW BUILDINGS.

**Aberdeen.**—The Woodside Free Library, the gift of Sir John Anderson to his native town, which is on the point of completion, is designed in Early Scottish character and built of granite, the dressing being of Kemnay and the rest of the building of Rubislaw stones. Its extreme length is seventy-five feet, the width being twenty-five. The site secured measures upwards of a quarter of an acre, so that there is a large amount of space apart from the site occupied by the building, and this will be laid out in ornamental fashion. The contractors are Messrs. A. Mitchell & Co., masons; Messrs. J. Garvie & Sons, carpenters; Mr. James Bannochie, plasterer; Mr. G. Davidson, slater; Messrs. D. McHardy & Son, heating apparatus; Messrs. Mason & Son, painters; Mr. A. Cochrane, plumber. Mr. Arthur Clyne (Messrs. Pirie & Clyne, of Aberdeen) is the architect.

**The Tender of Mr. George Gunn,** Beith, amounting to 680*l*. 11*s*. 6*d*., has been accepted for the construction of two additional filters at Irvine Waterworks. N.B.



## GENERAL.

**An Art and Industrial Exhibition**, similar to the exhibition at Worcester, is proposed to be organised at Wolverhampton.

**The Electric Light** has been introduced experimentally in one of the departments at the Post Office, St. Martin's-le-Grand.

**The Autumn Exhibition** of the Royal Birmingham Society of Artists will open for private view to-day (Saturday).

**The Library, Lambeth Palace**, will be closed for the recess for six weeks from August 29.

**The Weigh-house Chapel** will, it is stated, be required to be taken in carrying out the completion of the Inner Circle Railway.

**The Manchester School** proposes to apply for authority to borrow 14,600*l.* for the erection of the central school in Deansgate, the contract for which has been taken by Messrs. W. Southern & Sons.

**The Deal Town Council** have obtained permission to remove Sandown Castle, a dilapidated ruin, to enable them to construct a sea-wall and promenade, extending past Sandown, for the protection of the land from the inroads of the sea.

**A Government Measure** is being prepared at Berlin to secure the preservation of monumental works of art and antiquities, particularly churches, castles, fortifications, ruins, and pre-historic remains, as well as pictures and coins.

**The Bromsgrove Board of Guardians** at their last meeting decided to advertise for competitive plans for a hospital to accommodate sixty-five patients.

**The Will of Mr. G. Somers Clarke**, architect, was proved on the 29th ult. by Mrs. Clarke, the widow, the value of the personal estate being over 10,000*l.*

**The "North-western Lumberman"** says that the rapid increase of population in Manitoba has stimulated the inventive geniuses of the Dominion to contrive houses that may be portable and quickly put up. L. Forest, of Bellville, Ont., has planned one that is in three-foot sections, and dovetails together. A house, for a hotel or boarding establishment, has been put up at Winnipeg, over 100 feet long, two storeys high, and divided into apartments sufficient to accommodate 250 guests. The foundation was laid on a Tuesday, and the house was completed on the Thursday afternoon following.

**A Spire**, designed by Messrs. Alexander & Rowlatt, architects, of Middlesbrough, is to be erected on the church of St. John in that town. Mr. T. Dickinson, of Saltburn, is the contractor for the work.

**The Cabins of the P. & O. Steamers** now on duty as hospital ships in Egyptian waters have been painted throughout with Griffiths' Enamel Paint, manufactured by Messrs. Griffiths, Berdoo & Co., 51 South John Street, Liverpool, and 34 Leadenhall Street, London.

**The Monmouthshire Antiquarian Society** made its annual excursion this year to Mathern, when visits were made to Mathern Church, Mathern Palace, and Morius Court. Morius Court, said to have been erected by Francis Godwin, Bishop of Llandaff, is remarkable for the large and beautiful gateway which leads to the courtyard. Over the gate are chambers in two storeys, and these are flanked by two high square towers.

**Excavations at Pompeii** have just brought to light a beautiful inlaid marble table, with reclining bed ornamented with paintings; a bronze vessel with revolving handle; two Egyptian statues, covered with a patina of green glass, which is very rarely found; a tortoise and frog in marble; a Bacchus in terra-cotta; two marble busts; and a skeleton with bronze hairpins beside it. There was also discovered a cavity in the lapilli, which, when filled with plaster, will, it is hoped, produce a figure.

**At Chesterfield**, where the "Brush" system of electric light has been adopted instead of gas, the streets, which are altogether nine miles in length, are illuminated by means of 22 arc lights and 98 incandescent lamps, all of which are supplied from one dynamo machine driven by one engine.

**The Geological Survey of Great Britain** is proceeding at so rapid a rate that it has been computed by Professor Ramsay that the mapping of the solid and superficial portions of England and Wales which still remain unsurveyed will be completed, on the scale of one inch to a mile, eighteen months from the present time; that of Ireland in six and a half years; and that of Scotland, to which seven surveyors are to be transferred on the completion of the English survey, in eleven years. The re-survey, however, for those portions of England and Wales which were originally only surveyed for their solid geology will then take, it is reckoned, about twenty years.

**The Imperial Life Office** will in future pay all claims on "proof of death and title," instead of on the expiry of the usual three months after proof of death has been given. This regulation will apply to all policies now in force.

**Messrs. Spottiswoode & Co.** are about to make extensive additions to their large printing works. The new extension will face Shoe Lane, and the work is to be carried out from the designs of Mr. H. Dawson.

**Mr. S. Mancey**, builder, was summoned, on Wednesday, August 16, to Worship Street Police Court, by Mr. A. Payne, District Surveyor of East Hackney (South) and North Bow, for constructing two houses in Hepscott Road, Hackney Wick, with mortar mixed with earthy matter. Samples of the material used in lieu of sand were shown in Court. Defendant's counsel at first denied that the material had been used, and called a surveyor who affirmed that the mortar was good; but subsequently one of the defendant's own witnesses admitted having mixed the mortar with materials similar to the specimen shown. The defendant was fined 60*s.*

**A Party of Belgian Architects**, sculptors, painters, archaeologists, and ecclesiastics, members of the Guild of St. Thomas and St. Luke, whose object is to promote the study of Christian art, have come over to England on a fortnight's tour, with the intention of visiting the principal ecclesiastical cities. Having arrived in Canterbury, they spent several hours in the cathedral, the Dean and the Bishop of Dover acting as cicerones. The party numbers nearly eighty, and includes Professor Reusens, of Louvain; Canon Delbigne, of Brussels; M. Van Henkelom, President of St. Bernulphus Guild, Utrecht; M. Jules Helvig, of Liège; and M. Blaneheart, of Ghaut. The other places to be visited by the travellers are Rochester, London, Winchester, and Oxford.

**Ashburton Church Restoration Committee** recently accepted the tender of Mr. Abley, of Salisbury, in the sum of 3,726*l.* for the restoration of the parish church, but Mr. Abley having since refused to carry out the work in sections as required by the committee, it has been decided to accept the tender of Mr. Foaden in 3,822*l.*

**A Correspondent** calls attention to the pedestal on which stands the model of the Wellington statue presented by the sculptor to the Royal United Service Institution—a pedestal of such pleasing proportions, and so good in its ornamentation, as to be well worthy of inspection and consideration at the present time.

**The Nottingham Corporation Act**, which last week received the royal assent, confers upon the Corporation the power of making additional bylaws relating to new buildings, and of making one general set of bylaws for the whole of the borough, various sets of bylaws in force having been left unrepealed when the different districts were incorporated in 1877.

**The Thirlmere Scheme.**—An arbitration, lasting nine days, has just been conducted at the Surveyors' Institution, Westminster, on the claim of the Countess Ossalinsky to compensation from the Corporation of Manchester for taking 3,357 acres of land for the purposes of their Act of 1878-9, for the supply of water from Lake Thirlmere to Manchester and district. The witnesses for the Countess put the value at between 70,000*l.* and 90,000*l.*, while those for the Corporation average about 25,000*l.* The valuers for the Countess claim 60 years' purchase and 50 years for compulsory sale on an increased rental; and the valuation for the Corporation is based on 30 years' purchase with 50 per cent. compulsory sale on the present rental. Mr. Huskisson has reserved his award, which will be given at the end of October.

**Ventilation of the Reform Club.**—Messrs. Robert Boyle & Son's system of ventilation has been adopted for the Reform Club by the committee and architects, and Messrs. Boyle have received instructions to proceed with the work at once.

**The Coalbrookdale Company, Limited**, have taken the premises Nos. 43 and 44 Holborn Viaduct, as London show-rooms for their manufactures, and they purpose to keep there a selection of the principal articles in grates, stoves, ranges, gates, railings, &c., made at their foundry. Mr. H. C. Eyres is the managing director.

**The Pavilion and Pier** at Southsea, Portsmouth, which were opened a few days ago by the Prince of Wales, have been painted with "Albissima Paint" by Messrs. W. Hill & Co., of Gosport, under the supervision of Messrs. Davis & Emanuel, architects, Finsbury Circus. The amount of Albissima used to cover the surface was a trifle more than half the quantity originally calculated.

**Mr. H. J. Thurgood (Thurgood & Co.)** writes that, having taken into partnership Mr. Howard Martin, late of the firm of Podmore & Martin, of Croydon, their offices will still continue to be at Lonsdale Chambers, Chancery Lane, and he style of the new firm will be Thurgood & Martin.

**The Site** for the new Council Chamber at the north-east corner of the Guildhall will shortly be entirely cleared. The building in which the Chamberlain's and Architect's offices were situate has been dismantled, and on the other side of the yard semi-demolished walls alone mark the position formerly occupied by the Town Clerk's offices. The new Council Chamber is to be of a duodecagonal shape, and in style will harmonise with that of the Guildhall and the Library. The diameter will be 54 feet. It will be surrounded by a corridor 9 feet wide, by means of which ready access will be obtained to every part of the Chamber. The cost will be about 35,000*l.*



# The Architect.

## THE PROTECTION OF ANCIENT MONUMENTS.



OW that the "Ancient Monuments Bill" has passed, and the idea has thus come to be established in England that the extant remains of the structures of our remote forefathers deserve to be preserved under the authority of the State, it may be not inappropriate if we indulge in a few reflections, not so much upon the present outcome

of so many years' generous agitation—scarcely a perfectly satisfactory result, many may say, after all—as upon the degree to which in future times it may be possible for the friends of antiquarianism to expect the genius of our political constitution to recognise the extension of the principle.

When we of the Western World smile at the ancestor-worship of such a nation as the Chinese, we seem to forget that advanced philosophy is sometimes inclined to smile in precisely the same way at our own practice of what is precisely the same weakness. There is this difference, it is true, between John Chinaman and John Bull—the one practically looks farther behind him than the other. Few Englishmen, especially those who happen to be going up in the world rather than down, are found to cherish so much sincere respect as they might for the memory of a grandfather; some are known to despise the reminiscences of even a more immediate progenitor; but when they are invited to go back five hundred years instead of fifty, and to penetrate far beyond the limits of personal relationship into the cloudland of national history, the love of patriots for their forefathers in general has no bounds; indeed, as a rule, the less that is known of the men of antiquity beyond their names, the more affectionately are they regarded. The great test of merit, in this as in all else amongst a practical people, is of course the glory of success—or of failure destined afterwards to become success; and inasmuch as every monumental spot in the land, whatever recollections of misery may be connected with it—the Tower of London, for instance—cannot but possess in like manner and to a corresponding extent its associations of triumph, it follows that there will be no ancient building which to the archæologist is not an object of interest, and to the casual wayfarer, if he have anything like a head on his shoulders, an occasion of wonder.

At the same time all this is obviously a matter of degree. We cannot possibly afford either the time, the temper, or the money to keep up everything that is recognised as old throughout such a country as England. Not only would the Society for the Protection of Ancient Buildings, whose militant proceedings have made so much noise at one time and another during recent years, be entitled to insist upon protecting, no matter at what sacrifice, all the worn-out edifices throughout the length and breadth of the land, but there would soon be found, by some one or other, attached to every farmer's field and every cross-road, every little hill and every little hollow, such genuine reminiscences of "the past" that the nation might as well give up once for all the interests of practical work, and live, like Mr. RUSKIN and some other too-brilliant enthusiasts, in the happiness of wholly imaginary scenes. What, then, shall be the definition of an Ancient Monument, in the sense of a relic worthy of absolute preservation by the State for the sake of patriotic feeling? Of course Sir JOHN LUBBOCK'S Act covers but a very small number of such remains. It will be quite fair for the archæological world, therefore, to take it as the thin end of a wedge. How much farther, then, may they hope to drive in this wedge in some future session of Parliament?

The state of things in the neighbouring country of France is a case in point. There the recognition of glory, national and personal, goes a good deal into detail, much more so than in England. The authority of the State also goes much farther into detail than with us. We will presume that it is with the cheerful consent of private proprietors as an act of patriotic duty, but when we see château after château in that fair and sprightly land dedicated to the service of "*les gloires de la France*," no doubt it is with an uncompromising assertiveness

of the paramount importance of those glories which, if it could be applied to the houses of our noble lords and jolly squires in England, would be enough to make them fancy the rights of property to be not a divine ordinance but a dream. To imagine, in a word, the ancestral hall of an English "county family," because of Queen ELIZABETH having slept in it or OLIVER CROMWELL'S Ironsides having turned it inside out, declared by authority from Whitehall to be a National Monument, not to be altered by its owner, or even kept in repair, except under the direction of the Council of the Royal Institute of British Architects, may be easy enough to a sufficiently enlightened Gaul, but could surely never come to appear in the most remote degree possible to a true Briton. It is this very condition of the British mind that has kept Sir JOHN LUBBOCK and his followers so long at arm's length. In the old slave-holding days of America the most popular of all arguments in favour of maintaining the "domestic institution"—and of maintaining it, of course, for ever—was the assertion of the principle that the obvious interests of ownership must always prove to be the best of all safeguards for the personal welfare of nigger property. So amongst ourselves the strongest opposition to the Ancient Monuments Bill has been the like assertion of the like principle, namely, that the owner of the interesting relic would naturally be its very best protector. The logic is good if it be assumed that every such owner is an earnest antiquary of easy fortune; but in so far as it is possible that he might occasionally be, as Lord BEACONSFIELD describes the type, a personage "devoted to field sports, who knows no language but his own, and never reads," it must be confessed that the logic is as bad as it was in the matter of the American negro. The preferable principle, in the one case as in the other, is that the public interest is best secured by public law.

But it is a pleasure to recognise what is unquestionably the fact in these days, that English people of all orders within the limits of moderately educated intelligence are amiably alive to the public interest which attaches to at least such ancient monuments as may have for the time a really important history. To preserve, *coûte que coûte*—what is merely old, and without adequate associations—a corrupt Georgian gallery interpolated in a Gothic church, a tottering chimney that was once struck by lightning, or a heath that was haunted by highwaymen—is more than any protective society in this paradise of societies could hope to persuade the private owner to do; but whenever the object in question is of true merit, there is that in the national character at the present day which can almost always be relied upon—and not at all for the sake of vainglory—to answer the challenge of rational antiquarianism. Were it not so, Sir JOHN LUBBOCK'S Act would be almost an affectation; but, looking at this general feeling as it exists, the enactment may be regarded as wholly practical and useful, if only as an authoritative indication of the patriotic spirit which for the future all good Englishmen who happen to be the custodians of such relics of history are to be expected on their honour to display. It is this view of the case, we venture to think, which alone gives to the measure its full importance and value; and we expect to see the effect of it gradually appearing in the extension, amongst English property-holders of all classes, of that feeling of personal pride, as distinguished from the mere sense of proprietorship, which is the truest safeguard of generous national feeling. However strictly we confine the application of the principle, the number of historical monuments in England must be very large—much larger, indeed, than any statute even in the future could possibly attempt to reach. It is the good feeling of private gentlemen, therefore, upon which, in almost every instance, the archæologist must depend; and, while he has reason for perfect confidence, it is due to the general character of English gentlemen that he should frankly and cordially make the acknowledgment.

The archæologist must also clearly bear in mind that his own functions are not exhausted when he merely demands consideration for his professional dicta; he has to educate his party, in fact to educate the whole public, up to his standard. He must also take care that this standard is a reasonable one; the public of this country will not support an affectation any more than an imposition; the one as much as the other is an offence to their common-sense. It is on this ground that we have to own with regret a certain want of confidence in the Society for the Protection of Ancient Buildings. We do not treat with any respect the argument that its operations are pragmatical; an occasional error in that direction must be



expected and excused, and after all is but matter of opinion. But we cannot help thinking its principles are so easily formulated in the abstract, whilst their application in practice is so difficult of anything like reduction to rule, that it is scarcely possible for such a tribunal to keep within bounds, even if it were not self-constituted as it is. What we venture to suggest is, the province being so wide, that the Society may be content to do less than enough rather than more. And, above all, the mode of doing, even when it is less than enough, ought to be carefully divested of three things—cant, rant, and ridicule. Poetic sentiment and literary humour are alike lost upon nine out of ten of the owners of our ancient monuments; straightforward common-sense and disinterested sincerity will go infinitely farther than refinements of learning or even affectations of grace.

#### FRANCOIS BOUCHER.

BOUCHER has been aptly designated as the incarnation of the French art of the eighteenth century. Essentially a Parisian, he was born in Paris, Rue de la Verrerie, 1703. He started in life at the period when *la jeunesse dorée* of France was weary of the gorgeous splendour and stately magnificence which for seventy years had characterised the reign of LOUIS XIV. The "style Louis Quinze," created to suit the altered tone of society, fascinated by its grace, its refined elegance, and its voluptuous charm. Its first exponents—WATTEAU, BOUCHER, FRAGONARD, PAJOU—were true artists; but, as remarks the author of "L'Art au XVIII. Siècle," it was doomed by the force of events to a *décadence délicieuse* and was lost in the whirlwind of revolution which swept over France, whence art emerged clad in the *chlamyde* of ATHENE, but severe, frigid, and unattractive, as the works of DAVID and his school attest.

BOUCHER's father was an artist unknown to fame. He had, however, sufficient knowledge of his profession to recognise in his boy a talent superior to his own. He took him to LEMOINE, then in the zenith of his fame. The great man with difficulty credited the fact that *The Judgment of Susannah*, which the father had brought with him, was really the work of a lad of seventeen, and at once received him among his students. *Hercule et Omphale*, now in the Las Cases Gallery of the Louvre, proves LEMOINE's capability to train a future BOUCHER. His style, derived from CORREGGIO, VERONESE, and BAROCCIO, but essentially French in its expression, was precisely that which BOUCHER's genius most naturally adopted; and his first composition, *The Birth and Death of Adonis*, proves how completely, before having formed a style of his own, he assimilated his work to that of his master. Were it not for the "F. B." on the vase in one of the paintings, and the evidence given by the engravings of these by AUBERT and SCOTIN, as well as the entry in LA LISE DE JULLY's catalogue, we would doubt their having been the production of LEMOINE's pupil. The same, judging by the engravings which alone remain to us, must have been the case with the *Cupid Reaping* and the *Cupid Bird-catching*. BOUCHER, however, late in life, assured MARIETTE that he spent but three months with LEMOINE. We scarcely credit this statement. It is certain, however, that when BOUCHER left the studio he was a finished artist and thoroughly imbued with LEMOINE's *technique*. To the end of his life BOUCHER spoke of his old master with reverence; and on one occasion, when a *virtuoso* showed him a picture by LEMOINE which had been lengthened to suit a special niche, BOUCHER remarked, with ill-concealed disgust, "To my idea such works are like the sacred amphora, on which I would not dare to lay a sacrilegious hand."

While lodging at LEMOINE's the lad had to find means of gaining his daily bread. CARL VANLOO had done portraits at so much the dozen, and had even turned scene painter; OUDRY had designed conundrums; BOUCHER found a patron among the clergy, and painted a whole host of pictures of saints and virgins for Notre Dame des Victoires, and even illustrated a breviary by designs of the Virtues. He maliciously painted these beneath views of various Paris streets, which evoked a satire from the Jansenists. That BOUCHER should illustrate a book of prayer was not more startling than that BAUDOIN, the caricaturist, should have been selected to illuminate the missal for the Royal Chapel at Versailles.

It was the age of illustration. The engraver DE CARS, employed young BOUCHER to design the frontispieces, trophies,

&c., with which it was the custom to adorn books of law, for which he paid the lad sixty francs a month, besides giving him his board and lodging. "This," MARIETTE writes, "he considered an immense piece of good fortune." It was at this period that DE CARS' lodger designed the vignettes for DANIEL'S "History of France," published 1721. It is evident that to DE CARS he owed his knowledge of engraving, and of the art of etching. On seeing an engraving of one of his own compositions by BOUCHER himself, M. DE JULIENNE entrusted him with the delicate task of engraving several of the drawings and sketches bequeathed by WATTEAU to his friend and patron, which difficult undertaking BOUCHER accomplished with inimitable skill, even surpassing in spirit and *maestria* his great rivals COCHIN, SYLVESTRE, and BASAN. M. DE JULIENNE, delighted and surprised by the rapidity as well as excellence of young BOUCHER's work, paid him at the rate of a sovereign a day. Of the 104 etchings of WATTEAU's drawings executed for M. DE JULIENNE by BOUCHER, the most remarkable are *Le Sommeil*, *Les Petits Buveurs de Lait*, *Le Petit Savoyard*, and *La Tourterelle mise en cage*. Of these there are four editions. BOUCHER executed at the same period *L'Andromède*, at which AVELINE also worked, and *Les Grâces au Tombeau de Watteau*, of which the best edition is the proof *avant lettre*, sold after the death of Baron DE VEZE. BOUCHER engraved eleven of his own works, twelve of BLOEMART's, and one of LOUTHERBOURG's, which, with those executed for M. DE JULIENNE, make a sum total of 182 engraved and etched works. While thus gaining his livelihood, BOUCHER found time for more congenial work. In 1724, at the age of twenty, he carried off the first prize bestowed by the Academy with his *Evil Merodach delivering Joachim from Captivity*. The Saturday following this event he was carried in triumph round the square of the Louvre on the shoulders of his fellow-students, an ancient custom fallen into disuse. They finally deposited him at the door of his own lodgings. The material advantages reaped from this success were not to be despised. BOUCHER was lodged, fed, and instructed for three years at the expense of Government, receiving, besides, an annual gift of 300 frs. He was subsequently sent to Rome. VLEUGHEL'S, Director of the French Academy at Rome, in writing to a friend thus alludes to his arrival there in June 1728: "Among others came one BOUCHER with VANLOO, a very promising young fellow, for whom I had difficulty in finding a room, and only succeeded in securing a *hole* in an adjoining house." On his return in November 1731 he was elected Associate of the Academy.

A century and a half ago news travelled slowly. The reputation the young student acquired at Rome had not reached Paris, and BOUCHER on his return to Paris accepted an order from a sculptor, DORBAY, who, having recently built a new house, was glad to discover a young artist in need of employment, and allowed him to paint his house from the ground-floor to the upper storey. One among the many exquisite compositions with which BOUCHER decorated it was the well-known *Enlèvement d'Europe*, which M. WATELET purchased at DORBAY's death. The sculptor ill repaid the work; but better days were in store for the rising genius, who had the singular luck to attract the attention of the Mæcenas of the day, Baron DE THIERS, son of the great financier CROZAT, whose splendid gallery, inherited by his grand-daughter, the Duchess of CHOISEUL, has been engraved, and was among the finest in the world. Baron DE THIERS had inherited his father's accurate taste and unerring judgment in matters of art, and built a mansion on the Place Louis XV., less for his own accommodation than for the reception of his art treasures. Once patronised by M. DE THIERS, BOUCHER's success was assured.

A keen lover of pleasure, young BOUCHER threw himself with all the ardour of his fiery nature into the dissipation of Paris life, but never allowed his enjoyment of a *partie fine* to interfere with his work. His love adventures were legion; he freely spent the gold he gained at his easel among his fair enslavers; but they were to him the amusement of an hour, and neither occupied his mind nor heart. He early wearied even of the charms of his first model, MORFIL—a girl of Irish extraction, whose original name was probably MURPHY—and turned his thoughts to matrimony, selecting a very lovely girl of seventeen, whose extraordinary beauty inspired one of his allegorical pictures. Having induced her to give him a sitting, he persuaded her to marry him. MARIE BUTEAU no sooner became Madame BOUCHER than she seriously commenced the study of her husband's profession, in this imitating



the example of the great majority of the wives of artists of that period. Madame BOUCHER acquired the art of engraving, and, besides, attained a considerable degree of success in painting reductions in miniature of several of her husband's works, which said reductions have been frequently sold as originals.

FRANÇOIS BOUCHER was elected Academician on January 30, 1731. His reception picture was *Renaud of Armide*, now in the Louvre. Since the year 1704 the annual exhibition of pictures had ceased to exist; but fortunate as BOUCHER's future career proved, by the many favourable circumstances which contributed to its success, he was most fortunate in the reopening of the Salon in 1731, for thus he obtained the opportunity of bringing his works before the public and securing a popularity which steadily increased as years advanced. BOUCHER's career from this period was one long triumph. The "Olympus," not of VIRGIL, but of OVID, supplied him with the series of allegorical subjects which laid the foundation of his fame. Perhaps a certain affinity between the genius of OVID and of BOUCHER might be traced in the poetry of the Latin writer and the paintings of the French artist. If a ballet was composed and acted at Rome on OVID's poem "L'Art d'Aimer," it was this very poem which inspired the finest creations of BOUCHER's pencil. "*La Volupté*," writes M. DE GONCOURT, "c'est l'idéal de BOUCHER." He never attempted to paint the soul. BOUCHER was a worshipper and unrivalled delineator of physical beauty. His Venus rising from the waves, surrounded by garlands of Amorini, is the most seductive creation ever put on canvas. The undulating outline of the figure is grace itself; the smile is enchanting; the colouring has a freshness all its own; the atmosphere is all sunny light, we are fascinated by the witchery and charm of the whole composition: whether inspired by its contemplation to loftier aims or nobler purposes, is another question. DIDEROT, the philosopher and encyclopædist, with something of the bluntness of old JOHNSON, thundered his anathemas at BOUCHER, but his was the sole dissentient voice. All Paris rang with his praises; he was the man of the epoch, and perfectly represented the spirit of the times. BOUCHER's type of beauty was never aristocratic; but, if lacking in distinction, it was always bewitching. There is a childlike loveliness, essentially fresh and youthful, which evidently was his ideal, for he constantly reproduces it. The oval of the face is somewhat shortened, the eyes are large and prominent, the nose is *retroussé*. The full red lips are parted with a smile as exquisite as that of one of MURILLO's angels. However little of the angelic may have existed in the original of BOUCHER's Venuses, she must have been captivating as a NINON DE L'ENCLOS. It is only in his charming illustrations of MOLIÈRE'S "Ecole des Femmes" and "Précieuses" BOUCHER aims at giving an intellectual expression; but graceful as are the grouping and composition of these, he fails to convey the idea of an elevated type of womanhood. When not engaged in depicting the goddesses of Olympus, BOUCHER portrayed scenes of pastoral life. In these his graceful fancy and fertile invention found endless scope. But with peasants as they really exist he had nothing in common. His shepherds are grand seigneurs in disguise. He evoked Celadons, Phillises, and Lycidases from the world of fable. His shepherdesses are women of the world in petticoats of rose satin, their exquisite feet encased in high-heeled shoes, their crook beribboned, their sheep freshly sheared. FONTENELLE wrote of BOUCHER's peasants, "It appears to me that their costume is too correct to be real." But if his personages in these pastoral scenes are Parisians in fancy costume, the landscape in which they are placed is Nature in her loveliest mood. BOUCHER was not a dreamer as was WATTEAU. He paints Nature in her brightest and most positive aspect. The torrent dashes over a rocky bed, the wind blows through the branches of an overhanging tree, birds fly across the sky, moss is growing over a ruined colonnade, saxifrage and wild vine entwine and climb from tree to tree, typifying an exuberance of life in Nature which BOUCHER depicts in the freshest tones palette ever produced. The word *fouillis* was literally created to express the wealth of foliage on tree, shrub, and plant he had the happy power of reproducing in harmonised confusion. His scenes are full of movement. His farm-houses are thatched, but birds have dropped the seeds of some wild plant which grows in luxuriance on the roof; on one side is a water-mill clumsily constructed of rough planks; a pigeon-house covered with moss is perched

above an old water-tank, worn by the knees of successive generations of washer girls; in the farmyard there is a litter of straw, a broken ladder, a wheelbarrow, a hen-coop; fowls are fighting, a dog is barking, children are running across the yard. If his scene lies on a country road, a cloud of dust is raised by the animals returning from the fair, the sheep are crowded into a narrow road, and one tries to push beyond the others; and the donkeys are laden with copper utensils bought at the market, which glitter in sunny light. As a landscapist BOUCHER's preoccupying thought is to fill his canvas with life, light, and movement. Even DIDEROT admits that no artist understood as BOUCHER "l'art de la lumière et des ombres."

(To be continued.)

## BRITISH ARCHÆOLOGICAL ASSOCIATION.

THE members of this Association made an excursion on Wednesday, last week, to Dartmouth, performing the journey from Totnes by special steamer down the Dart. On the arrival of the party at Dartmouth a visit was first of all paid to the church of St. Saviour.

### Dartmouth.

Mr. Loftus Brock gave an account of the foundation and architectural features of the church. The west end corresponded with the date of the consecration of the church in 1372, while the east end was rather later, and belonged to the time of Sir John Hawley. The main walls were of earlier date, being apparently the shell of an older building. He called attention to the beautiful carved oak rood-screen, which was, he said, one of the glories of Devonshire churches. The famous carved stone pulpit had suffered mutilation at the time of the Reformation; the original sculptured figures had been destroyed, and replaced by the emblems and arms of Charles I. The fronts of the side galleries, dated 1816, were beautifully carved, their design following the same lines as that of the end gallery which belonged to the period of Charles I. Attention was also drawn to the altar-piece, a large painting, *The Raising of the Widow's Son*, dated 1818, by Brockdon, of Totnes; an artist, Mr. Brock thought, who deserved to be better known. The communion-table was pronounced unique, being supported at each corner by a figure of one of the Evangelists, the figure of St. Matthew at the north-west corner being shown as a double figure.

Some well-preserved brasses were described by Colonel Bramble. That of Sir John Hawley represented the knight with his two wives: Joan, whose hand he holds—a rather unusual feature—on one side, and Alice on the other. The brass was dated 1409, and was a good specimen of armour of the Camaille period, worn during the last twenty years of the fourteenth and first ten years of the fifteenth centuries. A second brass represented Gilbert Staplehill, Mayor of Dartmouth, robed in the gown which with more or less modification has come down to present days as the official mayoral garb. On leaving the church the interesting ornamental ironwork on the south door attracted notice; grotesque leopards are represented impaled on a tree, fashioned complete with roots, branches, and leaves.

The curious old houses in the Butterwalk and other parts of the town were next visited; some of the party went also to St. Petrock's Church, and the castle at the entrance to the harbour.

### Totnes.

A return having been made to Totnes, the visitors were, after luncheon, conducted by Mr. E. Windeatt to the East Gate, one of four original gates, two of which only remain. The East Gate, now much modernised, formerly consisted of two arched portals, one, with gates, for carriages, and a smaller one, "a needle's eye," for foot passengers. In the room over the gate a curiously-carved and coloured frieze was examined. Mr. Brock considered it was the work of a Flemish artist, though Mr. W. H. Cope was of opinion it was of Italian workmanship and origin; Mr. Windeatt, on the other hand, agreed with Mr. Brock, from the fact of the extensive dealings carried on by the merchants of Totnes in former days with Flanders.

### The Church of St. Mary.

Here Mr. Windeatt drew attention to the fact that the church was built of red sandstone, though no other building in the town or neighbourhood was built of that stone. The material was supposed to have been brought up the Dart from Stoke Gabriel, as several blocks of that stone had been found in the river in dredging. The manorial rights had been granted by the Conqueror to Judhael de Totnaïs, the Norman Baron, and the first notice of the existence of a church was found in that charter, "ecclesiam Sancte Marie de Toteneo," granted to the Benedictine Abbey of SS. Sergius and Bacchus at Angers. The church appeared to have been rebuilt in 1259, and again in 1432 by Bishop Lacy. Half-way up the fine old tower were three niches containing figures, the centre one being supposed to represent Bishop Lacy; under the figure is seen in raised letters, "I made the Tour." The church had been



recently restored under Sir Gilbert Scott, and Mr. Windeatt said he would leave the restoration to speak for itself. Before the restoration the beautiful stone pulpit had been covered over with paint to represent mahogany, and a wooden cornice had been put around it. One of the great objects of interest in the interior is the very handsome carved stone rood-screen under the chancel arch, with two parclose screens. It appears from some ancient documents that in 38 Henry VI. an order was made by the Corporation (who up to 1836 had control of the church), that the chancel should be divided from the church with freestone, as the Cathedral Church at Exon was.

Mr. Brock remarked that the church was a characteristic specimen of the ordinary Devonshire church, but above the average so far as its ornamentation was concerned. The window tracery generally, he believed, followed the old lines, but the east window was a modern production, although Sir Gilbert Scott prepared for it an admirable design. Having that day seen at Dartmouth the best oak screen in the county, they now saw the best stone screen in the county. With respect to the restoration of the church, its lines were excellent, but he rather complained of the removal of a monument from the chancel to the tower. He could often trace the history of a parish by little details which perhaps did not strike every eye, but all of which had their history, and to obliterate the later features of the church was to obliterate a certain portion of its history. Mr. Brock then took occasion to mention that there was in the north-east angle of the chancel outside a peculiar open arch. This arch was of much earlier date than the rest of the church, and was probably a portion of a much earlier building. Mr. Brock also suggested that the old lath and plaster baldachino, which stood in the chancel before the restoration, might have been put in front of the tower arch instead of being removed from the church. With regard to the rood screen and the stone entrance to it, near the altar, Sir James Picton, F.S.A., considered that the priest's doorway and staircase had been erected for an earlier rood loft than the present one, of which the beautiful screen alone existed.

#### The Guildhall.

The party were then received and hospitably entertained by the Mayor (Mr. E. Harris) and the Corporation in the neighbouring Guildhall. The Mayor remarked that Totnes was one of the most ancient boroughs of the kingdom, but as to the details of its history he must refer them to Mr. Windeatt, who was the antiquarian of Totnes.

Mr. Windeatt said the building was a portion of the old Priory of St. Mary, and proceeded to give a sketch of its history.

Mr. Brock suggested that if they took down the ceiling they would probably find a beautiful oak roof under it. The Corporation records were produced by Mr. Windeatt, who read quaint extracts from them; after which Mr. C. H. Compton added some remarks upon the ancient charters of the borough.

The Council chamber upstairs was inspected, and a further examination made of the deeds and charters. The party then proceeded to the castle, where Mr. Brock gave a short account of its history and the earliest probable use of the mound on which the keep was erected, and which he considered to be, as in other examples, such as Devizes, Restormel, &c., of ancient British work. He was of opinion that the early Norman lord of the town built only a wooden erection upon the mound, such as those depicted on the Bayeux tapestry, and that the wall of the present shell keep was of later date. He ascribed it to the twelfth or the earlier part of the thirteenth century.

The return journey to Plymouth was made at a late hour.

The proceedings of the Congress were resumed on Thursday at Lydford, the members having journeyed from Plymouth by special train to Tavistock, and thence on by carriage to Lydford, *via* Black Down, Mary Tavy, and Peter Tavy.

#### St. Petrock's Church, Lydford.

Mr. Brock, in the course of an address, said the building was one of great antiquity. The tower was altogether different from anything they had yet seen in Devon, and the plan was that of a very ancient building. Having examined the exterior, he found structural indications that the western part never formed a portion of the original building, and it was very possible that the original church consisted only of a simple nave and probably a small chancel. The western part was of the date of the south aisle itself. They had within the walls of this simple little building evidence of how the growth of the church must have commenced from small things. The tower was built some two feet away from where the old western wall formerly existed. On the north side there were evidences of the outside jamb, the coigns being visible. The builders of the tower—like wise men—erected it so that it would not interfere with the services of the church. The rough walling on the north side, where the original wall commenced, was extremely ancient. The font appeared to be of very early Norman date, but it was known by the researches of recent years that several fonts of Saxon date existed, not at all unlike the present one. The windows on the north side of the church were insertions of about the middle of the fourteenth century. To the whole of the

remainder of the church—the beautiful western wall and the south aisles—they might assign the middle of the fifteenth century. The tower was particularly interesting. It was built entirely of granite, and the work was massive and good. The dilapidated condition of the roof did not escape Mr. Brock's attention, and he suggested that it would give the custodians of the fabric some trouble before long. The principal ribs followed the lines of the barrel, and were carved with flowers, which were perceptible even now in the decayed state of the timber. Another curious ecclesiological feature was the rood loft, which was open all the way up to the point at which the priest emerged. Another feature seldom met with was the perceptible rise in the floor from the west end to the chancel stairs. Mr. Brock also noticed the massive blocks of granite used in the construction of the building.

#### Lydford Castle.

Under the guidance of Mr. Worth the party then repaired to the castle. Mr. Worth gave an historical sketch of the castle, and observed that there was no more suggestive site in Devonshire, because they had direct evidence in the earthworks that they were standing within the precincts of one of the great old forts of the Damnonii. The castle was surrounded on all sides by valleys. Lydford was of such importance in the Saxon times that a mint existed there, and there were in existence several specimens of pennies dating from Saxon times. Before Plymouth existed the Saxons came up and destroyed the mint. Whether Lydford itself was destroyed they had no evidence, but its inhabitants must have rapidly recovered themselves if it was, because, in the reign of Edward the Confessor, there was only one town which surpassed Lydford in importance, and that was Exeter. In Domesday Book they found it recorded on equal footing with the few great cities, and subject to taxation on the same conditions only as Exeter and London. It appeared to be a fair inference that Lydford lost its importance in connection with the Norman Conquest. After Exeter had given way it looked as though Lydford had stood out to the last and paid the penalty of its resistance. If that was so, he considered that Lydford in its decay was more to be honoured than many a city in its grandeur. Up to this date it was defended by earthworks, probably those of the original "hill fort" strengthened. The situation of Lydford was one of great capabilities—a tongue of land with deep ravines on two of its sides; a stout rampart drawn across the neck made it well defended, wellnigh impregnable. This portion of the earthworks could yet be traced, though their existence never seemed to have been suspected until three years ago, when they were discovered by the speaker. What did for the Saxon did not suffice for the Norman, and he reared the castle—a true keep—on an artificial mound of moderate height, with the base court on the north-west. The castle was mentioned as early as 1216, when it was granted to William Brieve. In all probability the fabric dated from the later part of the twelfth century, and formed one of the border fortresses by which the roads skirting Dartmoor were commanded. The building at various times had been much pulled about; still late Norman work was apparent on the south-east and north-east fronts. The entrance was on the north-west. The lower stage of the walls was in places eight feet thick. The area of the castle was entirely open to the sky, but divided by two partition walls into three apartments. Lydford sent members to the first Parliament of Edward I., but ceased to do so in the reign of Edward III. There was a Corporation and a Mayor, however, down to the middle of the last century, and the oldest and most grey-headed man in the place was always chosen coroner.

Mr. Brock said the castle was the only one of the kind in the district—a square keep distinctly Norman in plan, but not in his opinion affording distinct traces of Norman work—for the round-headed, splayed window openings enclosed square-headed slits; and the doorways were pointed. Nor could he see that it bore the marks of different periods. He was inclined to assign it, therefore, to the reign of King John, and to believe that in the main it was built as they saw it. No doubt, as there was a round mound, it had been preceded by a Saxon "strength."

The party then returned, after visiting the romantic gorge of the Lyd, over the moor to Tavistock. Brent Tor was passed *en route*, few, however, of the party ascending it to visit the church of St. Michael. A legend connected with the Tor records that the little fane owes its existence to the piety of a merchant who, in peril at sea, vowed to build a church on the first spot of land he saw; no sooner was the church built than the devil by night removed it from the foot of the hill to the summit, which lay in his dominions, but on the dedication of the building to St. Michael the enemy was sent flying down hill with a huge stone at his heels, which rock is still pointed out. The little edifice is only 32 feet long by 15 wide, with a tower 32 feet high, and for its size it is very massive. It is Early English in character, Mr. Hine identifying it with the church recorded to have existed here in 1283.

The members were entertained at the Bedford Hotel, Tavistock, for the Duke of Bedford, by the Rev. W. Tait.

#### Tavistock Church.

While inspecting this church Mr. Brock said that, by a record discovered in 1184, it was found that the fabric existed in 1134, and



was dedicated to St. Eustachius. It was rebuilt in 1318. As at St. Andrew's, Plymouth, the architecture fitted in very badly with the dates. The south aisle he took to be the aisle of St. Thomas A'Beckett. It was curious to find in the building occasional traces of the work of the fourteenth century. There was singular evidence that the church must have been all but remodelled a little later. The building itself exemplified all the points to which he had drawn attention as characteristic of Devonshire churches. There was no clerestory, there was the pointed barrel roof, the windows were broad and lofty. There was a chancel arch, which was a usual thing, and there was a western tower, which was a very unusual thing. At the east end they would see fragments of older work.

The Rev. Mr. Tait exhibited the registers and the curious old Cope chest found at the Bedford Hotel, with a Bible in its secret drawer. He said Devon was the fifth county into which printing was introduced, and it owed this distinction to the Tavistock Benedictines, who in 1525, or earlier, set up in their midst the eighth press that the kingdom had seen. Of two works still extant, the earlier gave the name of the printer as "Dan Thomas Rychard, monke of the sayd Monastery."

#### Tavistock Abbey.

The remains of this abbey were next inspected. This great Benedictine house was said to be of Saxon origin, going back to 961. It became eventually the leading monastery of the Benedictines in the West. It was destroyed about the year 1670, but far on into the last century important remains of the Abbey still existed, and the most extensive of these were cleared away for the erection of the Bedford Hotel. The noble church and chapter-house no longer existed, the chief remains being the refectory, now a Unitarian chapel, the still-house, the old walls of the Abbey, and the tower called Betsy Grimbal's, from a woman of that name having been murdered there many years ago. The tower contains a stone cistern, said to be a coffin. There is also a stone-vaulted chamber close by, called the "dairy," once the entrance to the refectory, and which still contains the arms of the Abbey on one of the bosses.

Mr. Brock, in conducting the party round the remains, traced the position of the missing portions. The lower part of the east gate was built of the locally notable volcanic ash of Hardwick about 1170, the upper portions of granite being of the 15th century. The two-storeyed tower-like building at the south-west corner of the Abbey was always known as the still-house. In the refectory, the original roof still remained, covered with a plaster ceiling, but the mouldings of the purlins and ornamental portions of the principal timbers which projected from the line of circular ribs had been cut away. Considerable attention was paid to the entrance to the refectory, with its groined stone ceiling. It has a chamber over, which was formerly approached by a circular stone staircase. This chamber had a handsome oak roof with trefoiled principals, now much decayed.

Mr. Rundle, the Duke of Bedford's surveyor, said he judged from excavations which had been made in front of the Bedford Hotel that the abbey church must have stood there. Encaustic tiles, forming portions of floor, had been found seven or eight feet below the present surface, and near the eastern end a large stone slab with an abbot's staff carved upon it, probably the top of a tomb. Fragments of white Beer stone, richly carved and resembling tabernacle work, had also been dug up. When old houses built about the middle of the seventeenth century had been taken down, blocks of stone, portions of cusped tracery, foliated capitals, and arched panelling had been found built into the walls, in style nearly all of them Early English or Middle Perpendicular. Tradition said the chapter-house stood where now was the present Bedford office. The outer walls were pulled down early last century for the sake of the materials, which it was said were used for erections now part of the hotel. Granite was extensively used for the pinnacles, windows, staircases, &c., of the abbey; but the bulk of the walls, all the square ashlar, much of the window tracery, carved capitals of columns and ribs, and filling of the groining, were of a compact trap ash stone, found about two miles from Tavistock. For the more delicate work in the interior of the church a white stone from Beer was extensively used, as was evidenced by the quantity of finely-carved work dug up or found embedded in walls of buildings. Some of these fragments were richly gilt and coloured. Little was known of the relations between the abbey and parish church, and a very complete series of the churchwardens' accounts from 1386 up to the end of the eighteenth century were unfortunately destroyed some years since. One entry contained receipts for offerings made to the ten altars in the church dedicated to the Virgin Mary, St. Thomas, St. Catherine, the Holy Trinity, St. Eustace (the patron saint), St. Blaise, St. George, St. John the Baptist, St. James, and St. Andrew.

At the evening meeting, which was held at the Athenæum, Plymouth, a paper on "Abbotskerswell Church" was read by Mr. J. Phillips, and another, on the "Antiquities of Plymouth," by Mr. Worth. In addition to these, papers on "The Associations of the Hoe" and "The Exeter Book" were contributed respectively by Mr. Bennett and Mr. Slater.

On Friday, Darlington Hall, the seat of Mr. Arthur Chamberlaine was visited from Totnes.

#### Darlington Hall.

The old hall is mentioned in Domesday as being held by Aldwin; in 1385 Richard II. granted it to Holland, Duke of Exeter. In 1587 it came into the hands of the Chamberlaine family, in whose hands it had remained since. Mr. Brock pointed out that the plan of the building was like most of the domestic houses of the period. It consisted of two quadrangles. The larger of the two, the remains of which still exist, had the domestic offices on both sides of it. The second quadrangle was smaller, and consisted of the best apartments. The work that remained was undoubtedly of the time of the rebuilding of the hall by John Holland, Duke of Exeter, the style being that of the transition from the Decorated to the Perpendicular. The mullioned and transomed windows in the tower were no doubt Elizabethan insertions; and the battlements and some of the corbels beside the tower were, he understood, rebuilt by Pugin some years ago. Proceeding into the great hall, the walls of which alone now remain standing, Mr. Brock said there was a fine open roof upon this hall at the commencement of the century, but as it was considered unsafe it was unfortunately taken down—a fact to be regretted, because an open roof of that early date would have been of great interest. The carved corbels—angels bearing shields—remained, and Mr. Brock also directed attention to the large open fireplace which marked the dais at one end of the room, and the three usual doors at the other end of the room, above which was the minstrels' gallery. Of the inner quadrangle, in part of which the house has been rebuilt, only fragments of masonry remain. No time was left to see the remains of the old church.

#### Berry Pomeroy Church.

This church was built, Mr. Windeatt surmised, about the latter part of the fifteenth century, by Sir R. Pomeroy, the south aisles being added by parishioners of importance, whose names were inscribed on the capitals of the columns. Mr. Windeatt called attention to the screen, and to the figures of saints in the lowest panels. These figures were discovered when, at the recent restoration, the old high pews, which were actually nailed to the screen, were removed.

Mr. Brock said the screen was a most beautiful work, and the small portion of colouring which remained showed how brilliant it must originally have been. The tower had a peculiarity he had not hitherto noticed in Devonshire, being "battered;" that was to say, it was broader at the base than at the summit. The recent restoration of the church was carried out by Mr. Medley Fulford, architect, and the execution of the work was much admired.

#### Berry Pomeroy Castle.

This castle, one of the most imposing ruins in the county, was also visited. Mr. Charles Lynam, of Stoke-upon-Trent, in giving a descriptive sketch of the ruins, said it appeared to be a matter of no uncertainty that a castle had been built there in Norman times, but no data existed from which its antique form could be learned. From the short inspection he had made he could venture on no definite opinion as to the time of the erection of the several parts. The gate-house, the wall between it and St. Margaret's Tower, this tower and the wall on the western side, were the oldest portions, and these did not appear to be earlier than fifteenth-century work. The utmost skill and care had been bestowed on the arrangement of the gate-house for its purpose of defence. A portcullis crossed the entrance—the side towers commanded it from the ground to the highest point, and commanded a view of every means of approach. Above the portcullis an opening was projected, whence missiles could be thrown below on the enemy. Nothing could exceed the skill displayed in the design of this part of the building, which, being the only entrance and standing against the higher ground, whence approach could have been the more easily made, was the weak point of the castle.

#### Compton Castle.

Compton Castle, which is ascribed as belonging to the middle of the fifteenth century, was hastily visited. Sir James Picton gave it as his opinion that it was a manor-house of the latter part of the fifteenth century, but that there was before that a castellated sort of building he entertained no doubt, although it was altered from time to time. There was no moat around it, and the defences were not such as were customary before the period to which he referred. The tracery of the chapel conformed exactly to this period. The style was of the Late Perpendicular.

A return was then made to Plymouth. At the evening meeting a paper by the Rev. Lach-Szyrma on the "Old Cornish Tongue" was read, a discussion on which closed the proceedings of the day.

On Saturday the members made excursions to Cornwood and Plympton. Slade Hall, the property of Mr. J. D. Pode, one of the Vice-Presidents of the Society, Cornwood Church, and Fardell House were visited. The latter is notable for the early years of Sir Walter Raleigh's life being spent there.

#### Slade Hall.

This is an extensive and somewhat modern-looking mansion. The visitors were received in the large hall, and Mr. Pode gave a



brief account of the building. Among the points of interest may be mentioned the "carved dado-work in the large hall and the ornamental roof. It is an arched collar beam roof, in design almost identical with that of the old Plymouth Priory, but believed to be 150 years older. Mr. Brock observed that the carving round the walls was almost precisely of the same pattern as that in the east gate of Totnes. The same flamboyant patterns predominated," the whole followed by a pretty canopy, which had been carved by no unskilful hand. The carving in the wainscoting was particularly beautiful, but it was not English work. Finding, therefore, some foreign work here and there, it may give rise to curious speculations as to its origin. He took it to belong to the fifteenth or sixteenth century, and the corncicing around the wainscoting to be the same as that of the arch itself, and the pretty arched roof which they had the gratification of looking at. The roof, which was a most beautiful one, belonged, he thought, to the time of James I.

#### Cornwood Church.

Mr. Brock in his remarks here pointed to the building as an instance in which the gradual development of plan could be traced from a building comparatively small to its present size. The nave would be the original form of the church, with addition of a western tower. While the tower still survived, nothing of the little nave remained. The tower was semi-Norman in character, the belfry windows being semicircular-headed, and the little tower arch pointed. The remainder of the building, like so many of the Devonshire churches, was Perpendicular. The flowing decorated windows in the walls were modern, like many other portions of the building. The pillars between the aisles and nave were of granite, one stone forming each shaft. Following the usual arrangements of Devonshire churches, the older parts were built of rag stone, and the later parts of granite. The building consisted of a central nave and two aisles, and there were marks of the addition of transepts about the same age, only separated from the rest by a few years. He said this because the transepts opened out not by return arches, but as a projection from the aisle itself—a better mode of arrangement. It gave the building all the appearance of a cruciform church. The present division of the nave and chancel by a timber roof and arch was not original. The original nave and chancel had no structural division except the screen. Mr. Brock was glad to see that the old sedilia and piscina were retained; they were of earlier date than the nave and the aisles, and suggested that the chancel was added to the older nave prior to the building of the aisles and nave existing.

Fardell House was next visited, and a paper read by Mr. Wright, the Congress secretary, in which he showed that Sir Walter was not born there, as many had supposed, because there was a letter extant in which Raleigh said he was born at East Budleigh. At Ivybridge the party took luncheon, and thence went on to Plympton, where Mr. Brooking Rowe took the party to the castle, and read a paper upon it. Other places of interest were also inspected, and a return to Plymouth was then made. In the evening the members, at the invitation of the Mayor of Plymouth, attended a conversazione at the Guildhall, where papers were read by Messrs. Cope, Hine, and Compton.

On Monday morning the members viewed some of the antiquities of Plymouth left uninspected on the previous Monday, under the guidance of Mr. Francis Brent. The citadel was the first point on the programme. Mount Batten, a curious old Martello tower, a work of Charles II., was also visited, and the members afterwards paid a visit to Port Elliott, the seat of Earl St. Germans, and Trematon Castle.

On the succeeding days various excursions devoted to pleasure closed the proceedings of the congress.

#### A PICTURE FROM POMPEII.

MR. E. N. ROLFE, writing from Naples, says:—An important painting has been found at Pompeii, and placed in the Naples Museum among the Pompeian frescoes. It represents the judgment of Solomon, and is the first picture on a sacred subject, the first fragment either of Judaism or Christianity, that has been discovered in the buried cities. The picture is 5½ feet long and 19 inches in height, and is surrounded by a black line about an inch in width. The scene is laid upon a terrace in front of a house adorned with creeping plants and shaded with a white awning. On a dais (represented as being about 4 feet high) sits the King, holding a sceptre and robed in white. On each side of him sits a councillor, and behind them six soldiers under arms. The King is represented as leaning over the front of the dais towards a woman in a green robe, who kneels before him with dishevelled hair and outstretched hands. In the centre of the court is a three-legged table, like a butcher's block, upon which lies an infant, who is held in a recumbent position, in spite of his struggles, by a woman wearing a turban. A soldier in armour, and wearing a helmet with a long red plume, holds the legs of the infant, and is about to cleave it in two with his falchion. A group of spectators completes the picture, which contains in all nineteen figures. The drawing is poor, but the colours are particularly bright, and the preservation

is excellent. As a work of art, it is below the average Pompeian standard, but it is full of spirit and drawn with great freedom. The bodies of the figures are dwarfed, and their heads (out of all proportion) large, which gives colour to the assertion that it was intended for a caricature directed against the Jews and their religion. This may be so, but my own impression is that the artist was anxious to develop the facial expression, and to do this, exaggerated the heads. There is nothing of the caricature about it in other respects—the agony of the kneeling mother, the attention of the listening king, and the triumph of the second woman, who gloats over the division of the child—are all manifest, and to my mind there is no attempt, intentionally, to burlesque the incident; but this is a matter of opinion.

#### WELLS AND WATER DISTRIBUTION.

A PAPER was contributed to the geographical section at the Congress of the British Association by Mr. P. de Tchihatchef, Member of the Academies of Sciences of Paris, Berlin, Munich, St. Petersburg, &c., entitled "The Deserts of Africa and Asia," from which the following is taken. Speaking of the province of Constantine, by the Sahara, he says:—

The wells constructed by the French engineers numbered at his last visit (1879), in the province of Constantine alone (and there are many elsewhere), more than 155; and as the works begun in 1856 have never been interrupted, and are rapidly advancing into the interior of the desert, the time may not be far off when all those regions, now so barren and so dry, will be copiously irrigated, an advantage which they certainly enjoyed once, seeing that the numerous oases spread over the Sahara and the Libyan deserts contain many remnants of Greek and Roman constructions; a proof that once they were populated and consequently provided with water. This was most probably got by means of the same so-called artesian wells which our modern times presume to consider as their own invention, whereas they were undoubtedly known to the ancients, and were even constructed in the very Desert of Sahara, as it is ascertained by Olympiodoros, a historian whose writings have perished, with the exception of a few fragments quoted by the Greek patriarch, Photius, one of which contains the following passage:—"In the oasis of Sahara the inhabitants used to scoop out excavations 100 feet and 250 feet deep, from which jets of pure water rise in high columns." But it was not in the Sahara alone that the ancients sunk artesian wells—they multiplied them almost everywhere; and to those artificial irrigations was due the once flourishing state of the plain, now so arid, which is covered by the ruins of Balbek (the ancient Heliopolis) and Palmyra. The English travellers, Wood and Darwins, discovered under those heaps of ruins numerous traces of ancient artesian wells; and such traces are frequent in the Arabian desert crossed by the Hebrews under the leadership of Moses. Since the invasion of the destructive Ottoman race all those monuments of ancient civilisation have disappeared, and it is the glorious task of France to make them revive once more in Algeria. Her exertions have been crowned with success, and really transformed this country in a most marvellous way; the creation of the admirable network of artesian wells established on a line of about 500 miles of length, and penetrating every day deeper in the desert, would be quite sufficient to secure to France a prominent place in the history of civilisation infinitely superior to that occupied by her most splendid conquerors. The subject suggests still many considerations, but I will limit myself to a word on the probable origin of the subterranean waters that feed these wells. In the Libyan desert, which is only the eastern continuation of the Sahara, Dr. Zittel is of opinion that between the oasis of Sirvah (the seat of the famous temple of Jupiter Ammon visited by Alexander the Great) and the Nile there is a large subterranean depression excavated in the impermeable clays and marls which compose the underground of the great part of the desert; the strata of the northern side of the depression dip to the south. Such natural subterranean water reservoir may exist equally in the Sahara, but so far nothing of that kind has been yet ascertained there, so that in the present state of our knowledge we are reduced to the supposition that the large subterranean water-sheds are chiefly produced by the rains in the mountainous country forming the northern boundary of the Sahara, and among which the Aurès range plays an important part. More probably the water furnished by those mountains (for in the Sahara itself rain is very rare) oozes through the different open crevices, joints, vaults, &c., and penetrate into the impermeable argillaceous strata.

No doubt the climatic changes ascertained in the Sahara-Libyan desert must suppose similar changes in the countries surrounding the Mediterranean basin, as, among others, Egypt, Syria, Asia Minor, &c. And that is really the fact, the arguments supporting it being as numerous as convincing. In his work on the climate of the Mediterranean countries, Theobald Fischer, after having studied the changes which they have undergone on that account during the historical periods, comes to the conclusion that such changes have not been very conspicuous in the regions of the northern shores of the basin, where the climatic modifications



pointed out in Asia Minor are considered by him as only local and exceptional phenomena, but that it is quite different in the regions situate on the southern shores of the Mediterranean, to the south of the 34th parallel, where rains, even in their normal state, are so inconsiderable that the smallest reduction of their amount is sufficient to alter the climate. Among the countries liable to such reductions, Theobald Fischer quotes Syria and Palestine, countries full of traces of ancient rivers and artificial irrigation, indicating a region once thickly populated, but which now is transformed into a dry desert, not only by the fault of men, but also in consequence of a complete change in the atmospheric conditions. Theobald Fischer points out equally the numerous deeply-excavated *wadi* in the whole of Africa, which doubtless represent so many beds of ancient rivers, in a time when rains were much more frequent than now. According to Theobald Fischer, the increase of the atmospheric dryness in North Africa is equally proved by the disappearance of the large mammals and the late introduction of the camel in those regions. This animal, for all communications now quite indispensable, seems to have been unknown in Africa almost until the Christian era, for no figure of it has hitherto been discovered on the monuments of Egypt and Meroë, and Polybius, speaking of the Carthaginian cavalry, mentions elephants, but never camels. In historical times North Africa was inhabited by the elephant and the rhinoceros, and what is still more significant, by crocodiles; for those amphibians suppose the existence of rivers not liable to be dried up. It is impossible to attribute the disappearance of all those animals only to the action of man; the less so as the countries where they have been mentioned were infinitely more populated than they actually are, and therefore offered to wild beasts a less favourable abode than now. We are consequently compelled to admit an alteration in the climatic conditions of the country—namely, an increase of atmospheric dryness, which may account for the late introduction of the camel in North Africa and Asia Minor, as well as for the disappearance of the elephants. In support of this opinion, Theobald Fischer reminds us that both in Asia and Africa the elephant excludes the camel, and *vice versa*; so that in the superior part of the valley of the Nile, where the elephant prospers, the camel thrives with difficulty. Dr. Oscar Fraas quotes equally the absence on the Egyptian monuments of any figure of the camel, and that not only in the famous ruined city Sagara, the walls of which are covered with pictorial representations of different animals, but also in Thebes, founded 3,000 years after Sagara.

This fact proves that at that time the desert did not exist; the presence of which is, moreover, excluded by the numerous splendid monuments, which certainly their constructors would not have built in the midst of inhospitable solitudes, no more than the Emperor Adrian would have erected near Rome the famous villa Adriana amidst marshes, had they existed then as now. Oscar Fraas is of opinion that in Egypt the climatic conditions were quite different from the present ones even in the time of the Greeks, when Alexandria was the brilliant focus of science and art, radiating her light on the whole world then known. He believes that the extraordinary intellectual activity which animated this city supposes another climate, a less dry air. "On the present soil of the Nile," says Oscar Fraas, "no philosophical system will be born, and no human power shall be able to erect there universities capable to cope with those of Europe." The conclusions suggested by Egypt are applicable in a still higher degree to the neighbouring peninsula of Sinai. When we consider that in this perfectly arid, waterless peninsula the people of Israel, counting 60,000 fighting men, remained, after the exodus from Egypt, several years, it becomes quite impossible not to admit that in those times Sinai was a fertile Alpine region, provided with rich pasture grounds and irrigated by copious sources; in no respect could such a country have the slightest resemblance to the barren desert it is now.

The few instances reported are sufficient to prove that the climate of the Sahara-Libyan desert, as well as that of the countries surrounding the Mediterranean, have really undergone important alterations, even during historical times. Now there are proofs that similar changes in the level of the ground and in the vegetation of these regions have equally taken place at a comparatively recent epoch. Gerhard Rohlfs, the well-known African explorer, has ascertained the sinking of the whole shore of Tripoli to the Gulf of Great Syrte; and, according to him, this sinking is so conspicuous that he was perfectly able to appreciate it during his repeated visits to the country. He quotes very remarkable instances of this phenomenon, and says:—"I do not think that anywhere on our globe such a rapid sinking of the soil has ever been observed." A quite opposite movement of the soil occurs on the neighbouring Tunisian shores. The bay of Porto Farina two centuries ago was considered as an excellent port, 30 to 50 feet deep, so that in the year 1655 Admiral Blake could very comfortably anchor there with his naval force, composed of nine men-of-war. At present the Porto Farina has hardly a depth of 2 feet, and the time is not far off when the whole bay will be joined to the continent. Again, the celebrated city of Utica, which, under the Carthaginians, possessed a splendid port, is now converted into a large sandy plain, and the ruins of the once littoral city are more than twelve miles distant from the sea.

There are few places in the world which offer a more melancholy contrast between the present and the past than this sandy, perfectly shadeless plain, which I crossed under the scorching African June sun, without meeting a single living creature of any kind. And still I became familiarised with similar impressions in the classic regions of Asia Minor, where not only men, but also nature, have for so many centuries practised the work of destruction. But if Nature destroys, she equally creates, and in a topographical sense Asia Minor offers, on that account, the most striking examples. During the ten years I devoted to the exploration of that magnificent country I was able—the ancient geographers and historians in my hand—to ascertain the modifications which the surface of this country has undergone, only since the Christian era. Those modifications are so considerable that, taking into account the increase of solid land produced by the formation of large river deltas and the filling up of seas and gulfs, it can be said, without exaggeration, that the surface of Asia Minor has conquered, during this comparatively short time, the amount of a little province; a kind of conquest which is still rapidly continuing, so that one day may be realised the prophecy of Strabo, who, eighteen centuries ago, declared that the time shall come when the shores of Cilicia may reach the island of Cyprus—an event likely to give great trouble to diplomatists, if such functionaries are then still existing.

#### ABBOTTSKERSWELL CHURCH.

THIS was the title of a paper read at the meeting of the British Archaeological Association by Mr. Phillips, from which the following is an extract:—

The earliest mention on record of this parish is in a cartulary of Sherborne, whereby it appears that in the year A.D. 956 the manor was granted by Eadwig, otherwise King Edwig the Fair, to a lady named Edelhild. This lady, elsewhere called Ethilda, the daughter of Edward the Elder, and half-sister of Athelstane, married in the year 926 Hugh Capet, Count of Paris, and founder of the Capetian Dynasty of France. The manor of Abbottskerswell being conveyed to the lady Edelhild, it is a probable assumption that this was the period of the founding of the church. In 1316 to "Abbotdescarswell" were annexed the hamlets of Eggeswill (now Edginswell, in Mary Church) and of Cockington. And two years later a royal licence was granted to the Abbot of Sherborne to "let to farm" the manor of Carswill for the term of ten years. This accession of property and licence to lease appear to point to a period when an effort was made to raise funds for some special purpose, and since the architecture of the present edifice points to this period as the time of its erection, it is a fair deduction that for these special purposes these extra grants of land were made; and hence we look to the Abbot of Sherborne as the builder of the church as it now stands. In the course of the recent examination of the church for the purpose of restoration, there was discovered, beneath plaster and whitewash, a much mutilated figure or effigy, offering various points of interest and speculation as to its purport and date. For this latter, and comparing it with others, it may pass as cotemporary with the latter portion of the church, and a most singularly graceful and accomplished piece of sculpture it has evidently been. In height it stands about seven feet. It is completely hollowed out at the back, so that there is now probably nowhere more than a thickness of four inches. The stone may be Purbeck freestone, but I also think it is not unlike that which is raised near Amiens, on the line to Paris. The head has been encircled by a sculptured crown, with a fillet, in which are ornaments representing precious stones. From beneath the crown fall massive tresses of hair, brought out with unusual elaboration in the sculpture; also from beneath the crown depends a veil at the back. The robe falls in folds to the ground, and has been elaborately decorated, both in a light and also in a black pigment. The sculptured crown of the head has been for the most part cut away; two complete details alone remain, and which, though not unfamiliar, I have yet been unable to identify. A gentleman in the British Museum, to whom I sent a sketch, can only compare it to the crown of Richard Cœur de Lion in the Cathedral of Rouen. The present position of the figure is puzzling. It has been suggested that it was brought from some larger and more important church to be hidden from the eye of the despoiler. This appears to me most far-fetched, being placed in the angle of the south window of the chancel. There is no name connected with the early history of this church, nor with the parish, of any distinction beyond that of the Lady Edelhild. It is suggested, then, as a fair presumption, that at the rebuilding of the church by the abbot and monks of Sherborne, to whom the history of the Lady Edelhild must have been familiar—as the first mention of the parish is in a cartulary of their abbey, and concerning whom they probably had more information than has reached us—they desired to commemorate the munificence of the royal lady who founded the church, which had become one of their benefactions.

A Memorial to the poet Longfellow is proposed to be erected in Westminster Abbey. Among the names on the committee is that of Sir Frederick Leighton.



## NOTES AND COMMENTS.

THE bye-laws of the Lincoln Urban Sanitary Authority appear, as far as building regulations are concerned, to have been for some time a dead letter, the rule being seemingly to violate rather than observe them. Several persons have lately been summoned before the Lincoln City Police-court for infringement of certain of the bye-laws—laws in one or two cases specially necessary—framed as a precaution against the spread of fire. The parties summoned have in the present instance been let off with the imposition of a small fine, as the cases were mainly brought into court to secure the observance of the bye-laws, the deputy town-clerk observing that he had a long list of other offenders, and that if all the houses which had been erected within the last eighteen months were inspected, in no instance would it be found that the bye-laws had been complied with. No doubt those who engage in building operations for the future will hesitate to follow the example of such who have hitherto, when warned, been pleased to content themselves with refusing to carry out the bye-laws.

THE appeal which we noted last week, pointing out the desirability of the preservation of the "Druids' Circle" at Turton, near Bolton, proves to have been made too late for any practical purpose as far as these ancient remains are concerned. As matter of fact, the "Druids' Circle" is a thing of the past in every sense of the word; it no longer exists. Some gentlemen in Bolton have just paid a visit to the spot, "when," as they say, "to our deep regret and utter disgust, we found that the vandalism of some uncivilised being had razed every stone in the circle to the level of the ground."

WHEN parishioners desire to furnish bells for their parish church it is usually supposed that provision has been or is to be made for their reception. Something like a little oversight in this respect seems to have been committed by persons interested in Earl's Barton Church, which by the way has both tower and bells. The bells are, however, in a dangerous state, and are liable to fall or crack at any time, according to the report made on their condition. Mr. TAYLOR was in consequence asked to send an estimate for their restoration, and a notice was posted on the church door that a collection for the necessary funds would be made at the evening service. But by the evening the notice had disappeared, and the vicar informed the congregation that such a notice could not be posted without the signature of the vicar of the parish, and added that Mr. CARPENTER, the architect for the restoration of the church, deemed the vibration of ringing the bells would be dangerous till the tower itself was rendered secure—the moral being that the repair of the tower must precede the restoration of the bells. This, however, was not quite all: the enlargement of the school, the vicar said, would have to precede all else, and no collection could be made for the bells. The promoters of the scheme, notwithstanding, collected nearly 2*l*. for the purpose as the congregation left the church.

A NEW room has been opened to the public at the Exhibition of Decorative Art in the Palais de l'Industrie. The Paris exhibits it contains are illustrative of the history of costumes and art of clothing, and include the fine collection of engravings sent by M. VICTORIEN SARDOU, who has himself compiled the catalogue.

THE St. Petersburg municipal authorities, moved thereto by the ever-increasing number and destructiveness of fires in that city, are engaged in erecting several buildings of different types, upon which experiments will be made with a view to discovering the form and mode of construction best adapted for resisting the destroying element.

THE arbitration jury appointed to award compensation to householders and tenants for the alterations necessitated by the raising of the level of the Marbœuf quarter of Paris has just terminated its task. To the owners of houses they have allotted 10,801,000 francs instead of 4,634,660 francs offered by the municipal authorities, and to the *locataires* 4,801,041 francs instead of 1,542,516 francs. These awards afford a fresh and striking proof of the enormous rise that has lately taken place in the value of Paris property, for it is said that the offers of the city were founded upon the assessment value only ten years ago.

AT the last meeting of the Académie des Inscriptions et Belles-Lettres, Paris, Mr. EGGER communicated a paper by M. MELETOPONLO, a well-known antiquarian of Athens, describing and explaining a Greek inscription lately found near Zea, on the western side of the Piræus. This inscription, of which all but fifteen of the characters are intact, covers ninety-seven lines, and has been exactly reproduced by photography for M. MELETOPONLO's work: it dates from the fourth century before the Christian era, and contains the contract and plan of execution of the naval arsenal constructed by the architect PHILON of Eleusis, and considered by STRABO as one of the greatest architectural masterpieces of the epoch.

THE Canadians have paid the British Association the compliment of asking them to hold their next annual meeting in the Dominion. Invitations were likewise forthcoming from the towns of Birmingham and Southport. When the matter was formally taken into consideration the deliberations resulted in choosing between Canada and Southport, the votes being ultimately given in favour of holding the annual meeting for 1883 at Southport. A question incidentally arose during the proceedings as to whether a visit to Canada could be considered to come within the general scope of the Association, but the fact of choice being finally made between an English town and Canada apparently disposes of that question in an affirmative sense. The meeting has been fixed for September 19, 1883.

M. PAUL MANTZ, the Director of Fine Arts, Paris, is setting an example that might be followed to advantage in every public office in the world. Immediately on his appointment to the post he gave instructions for the clearing out of all the pigeon-holes and document-boxes of the department. Their contents, which have been accumulating during the past ten years, and consist of reports from special commissions, projects and plans of every sort, are to be carefully examined, endorsed, and classed, after which M. MANTZ will himself go over them and dictate the required decisions and replies.

IN the report of the Survey of Eastern Palestine, submitted at the meeting of the British Association, it is noted that Captain CONDER accompanied the Princes EDWARD and GEORGE OF WALES on a tour in Palestine, which lasted six weeks, in the course of which the Mosque of Hebron was visited, and an accurate plan taken by Captain CONDER. The results of the work so far have been, among other things, the discovery of a vast number of cromlechs and rude stone monuments, and Captain CONDER has established the fact that this part of Moab was a great centre of the form of religious worship of which these monuments are the remains. He suggests that among them are the altars of Balak. He has proposed identifications for Baal Peor, the Field of Zophim, the Ascent of Luhith, Jazer, Sibmah, and Minnith—six biblical places previously unknown; he has collected a great quantity of Arab folklore, with tribe marks and traditions; he has found a most remarkable building of Persian character at Ammân; and he has made a collection of sketches and plans of the greatest value.

ACCORDING to the *Chronique des Arts*, during the month of June last M. MASPERO, the successor of the famous MARIETTE BEY as director of the Boulocq Museum at Cairo, succeeded in obtaining from the Egyptian Government a small credit for fitting up the new galleries constructed during the past winter. The various objects which have hitherto encumbered the museum have been arranged in their new quarters, among the new exhibits being the celebrated PHARAOH mummies discovered last year among the ruins of Thebes.

ON July 8 M. MASPERO received a pressing invitation from the French Consul to join a special train that was about to transport a number of Europeans from Cairo to Ismailia. At first he refused to leave, and steadfastly continued his work of arrangement and classification at the museum; a week later, however, an imperative order arrived, and with great reluctance he was compelled to abandon his precious collections. The museum is closed, doors, windows, &c., being carefully fastened, and the building confided to the care of two native employés, upon whose fidelity and courage the director believes he can safely count.









INK PHOTO

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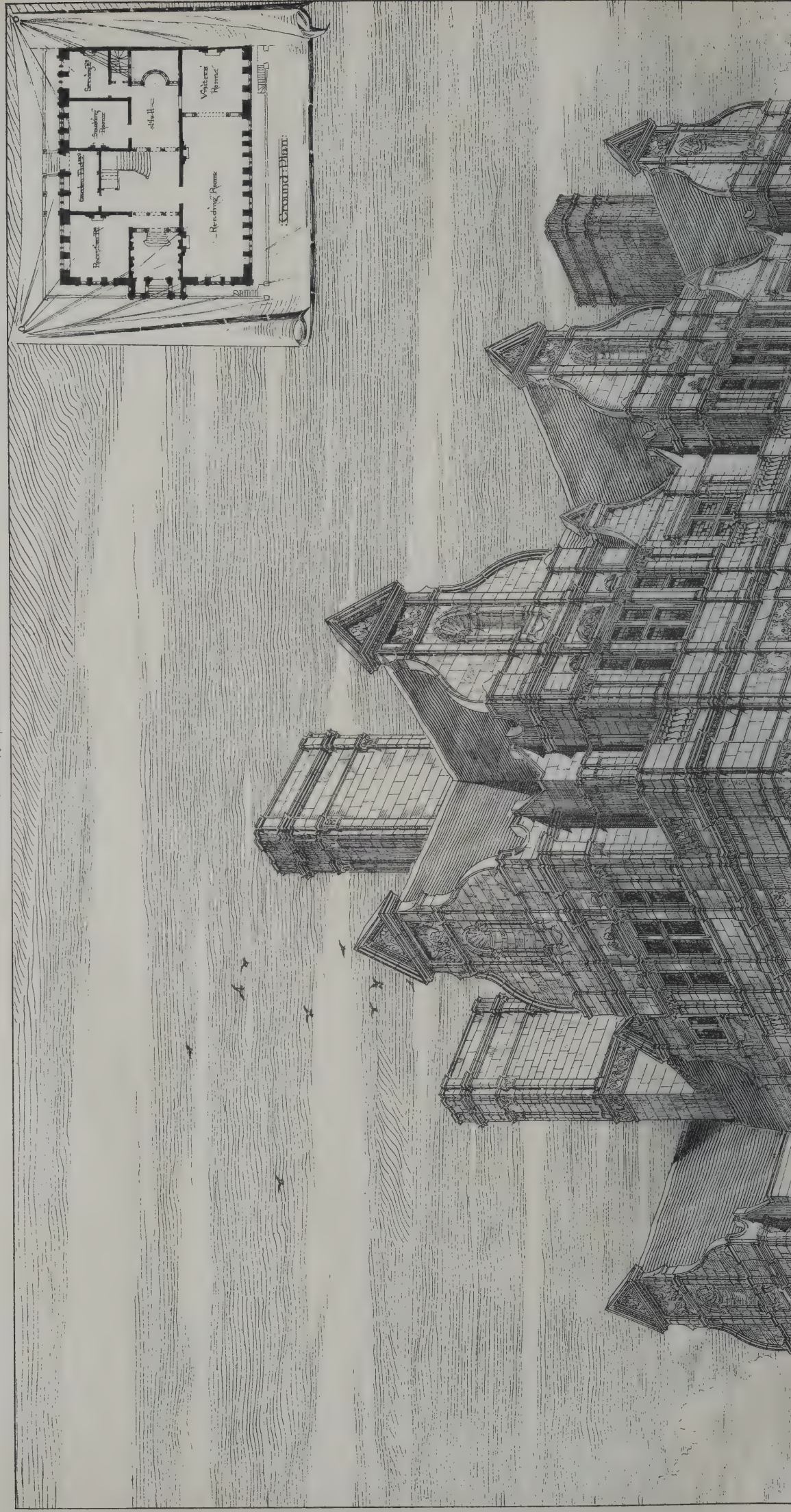




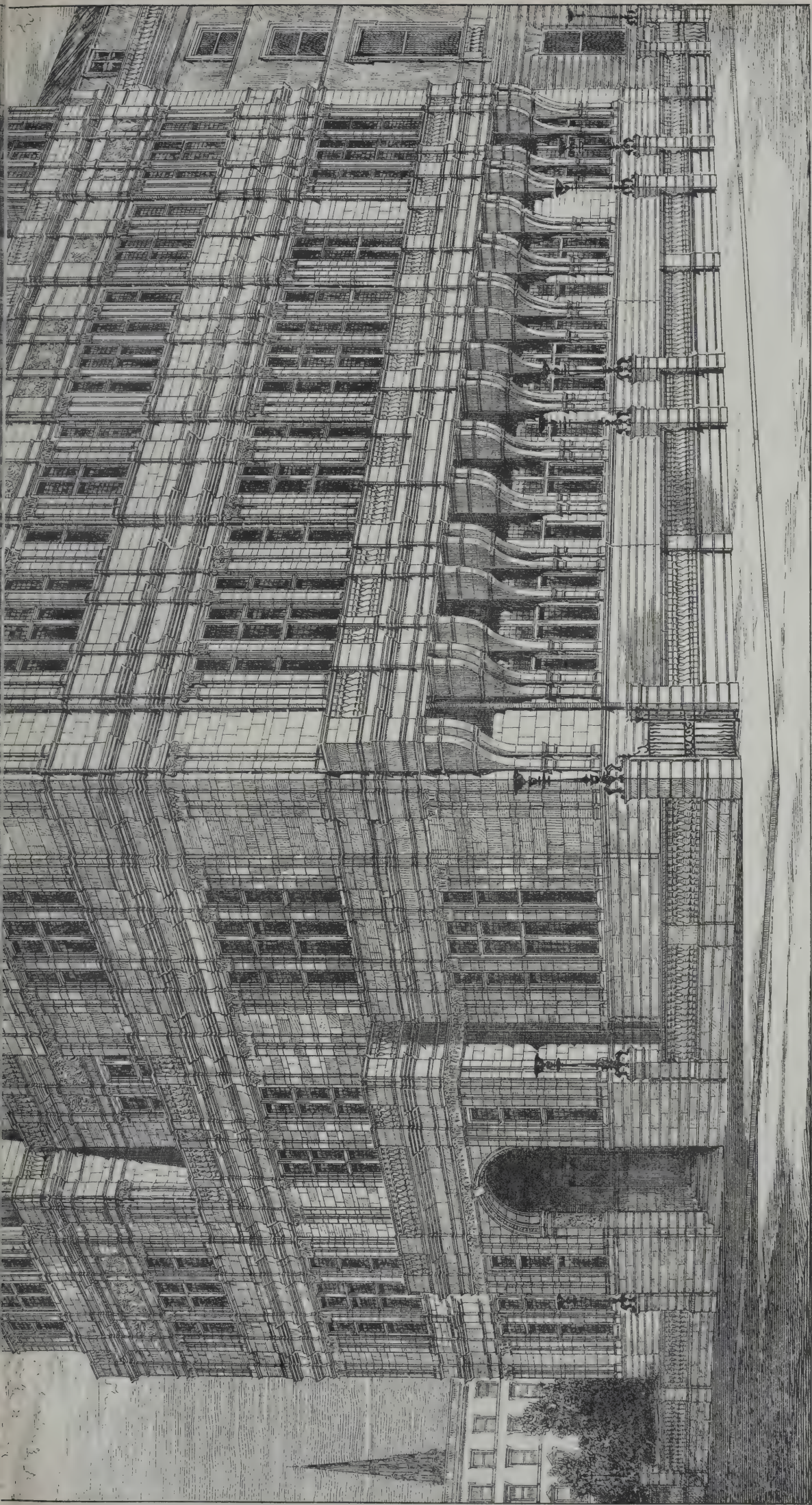




The Architect, Sept. 2<sup>nd</sup> 1882.







DESIGN FOR A CLUB.  
BY EDWIN C. HARDY.







## ILLUSTRATIONS.

AGRICULTURE, DECORATIVE FRIEZE: POTTERY.

DESIGN FOR A CLUB.

A SLIGHT description only is all that is required to supplement this design, which otherwise explains itself. First of all, the aim was to place the whole range of the two principal rooms towards the main street, with the library well to the back of the building, to avoid noise and the direct rays of the sun. On the first floor are the coffee-room and visitors' coffee-room (over morning-room), house dining-room, library, serving-room, and stores. The next floor contains secretary's offices, facing the principal staircase. On the left are situated bed, dressing, and bath rooms for residents; while on the right are two billiard-rooms, card-room, serving-room, store, lavatories, &c. The third floor is given up to men's and maids' bedrooms. Under the ground-floor and above the basement is a mezzanine containing ten bath and dressing-rooms, also large lavatories, water-closets, &c.; the remainder is occupied by housekeeper's room and stores, steward's room, general wine-cellar, and china store. The basement contains a kitchen, 36 feet by 24 feet, and scullery, 26 feet by 20 feet (each of these rooms are 20 feet high), men's sitting-room, maids' sitting-room, servants' hall, butler's pantry and bedroom, special wine-cellar connected with general wine-cellar in mezzanine, heating chamber, and the usual multitude of offices necessary to a large household.

EDWIN G. HARDY.

## THE BRITISH ASSOCIATION.

THE following abstracts of some of the papers read at the meeting of this Association may be of interest:—

Mr. B. Baker, in a paper on the Forth Bridge undertaking, gave Sir Thomas Bouch the credit of the bold proposition to cross the Forth in two spans of 1,600 feet, and so avoid the necessity of intermediate piers in unprecedented depths of water. That structure, however, was abandoned after the disaster to the Tay Bridge. Mr. Fowler submitted a project for a bridge on the continuous girder principle, and an Act had been obtained for constructing such a bridge, having two spans of 1,700 feet, two of 675 feet, fourteen of 168 feet, and six of 50 feet, with a clear headway of 150 feet above high-water spring tides. Not only would such a bridge prove stiffer than a suspension bridge, but it would also be cheaper. Steel was to be used in the construction of the bridge. No punching or shearing would be allowed, and all holes drilled through the whole thickness of plates and angles after being put together. The effect of wind-pressure on the superstructure had been carefully guarded against, and he thought it might be said the bridge would withstand the strongest hurricane yet known. The total length of the great continuous girder was 5,330 feet, or say a mile, and the viaduct approaches 2,754 feet, or rather over half a mile. The heaviest train traversing the bridge would not deflect the 1,700 feet girder more than four inches, while a wind pressure equivalent to 30 lbs. per square foot over the entire 1,700 feet would bend the bridge laterally less than nine inches. About 42,000 tons of steel would be used in the superstructure of the main spans, and 3,000 tons of wrought iron in that of the viaduct approach. The total quantity of masonry in the piers and foundations would be about 125,000 cubic yards, and the estimated cost of the bridge 1,500,000*l.*

A report of the Committee on Wind Pressure, which was read, stated that the total pressure on small plane surfaces due to actual winds in high and exposed positions had to a great extent been ascertained with sufficient accuracy for engineering purposes. It must be assumed, for the present at least, that for engineering purposes pressures of 80 lbs. or even 90 lbs. per square foot on surfaces had been correctly recorded in extremely exposed positions, such as the Bidstone Observatory, while pressures approaching the limit prescribed by the Board of Trade, 56 lbs. per square foot, might possibly act on engineering structures in exposed positions. As in the design of marine works the depth of water and the length of fetch enabled some estimate to be made of the strength of structure required to withstand the heaviest seas to which they might be exposed, so a careful comparison of the wind pressure observed during the height of a gale at various stations where anemometers existed would enable some estimate of the relative exposure of similar places to be made. Exceptionally high gusts of short duration should be excluded from the comparison as being probably limited in area.

Mr. J. Clarke Hawkshaw, after describing the history of the Channel Tunnel movement, said the best line for the Channel Tunnel was but one of many factors to be taken into account. The Folkestone route would sacrifice all those of known value for the one of which the value was the least certain. No tunnel could ever be driven under the Channel without meeting with some water, and an attempt to make one without ample preparations for dealing with a large quantity of water would only lead to

waste of money, and perhaps failure. The advantages to be obtained by making the tunnel in a direct line from Fanhole to Sandgate were the following:—The shortest sea tunnel; as short a land tunnel as by any line; a greater thickness of chalk through which to tunnel the best termination for effecting junctions with the existing English railways; and a termination affording facilities for defence at a less cost than elsewhere. No certain advantage could be claimed for the Folkestone route, and as compared with the route to the east of Dover it laboured under the following disadvantages: The sea tunnel must be at least three miles longer; the land tunnel must be four miles longer, unless the mouth was placed in the Folkestone landslip; the chalk on the line of tunnel would be only half the thickness—in round numbers, 250 feet, against 500 feet; it would emerge near no fortifications; nor could it be connected with the London, Chatham, and Dover line at Dover. Further, the tunnel must be made for a great part of its length near the outcrop of the chalk on the sea-bed, which should be avoided. One of the requirements to be fulfilled by the tunnel was that it should be so designed as to be capable of being worked by ordinary locomotives. That, of course, would necessitate artificial ventilation, but in a tunnel in a direct line between Fanhole and Sandgate he believed 500 effective horse-power would be sufficient to carry on the ventilation.

Mr. Boyd Dawkins, treating this subject from a geological point of view, said, the general conclusions to which he had come were that the lower beds of chalk marl and the lower part of the gray chalk were only strata in the chalk sufficiently impervious to allow of the construction of a tunnel in the dry; secondly, that the outcrop or grey chalk and chalk marl between Folkestone and the Shakespere Cliff was the best position for a tunnel, which could strike the lower part and remain in it throughout, so as to join the working of the French Channel Tunnel Company; thirdly, that the fault in the lower part of the gray chalk did not allow of free percolation of water and was not likely to become a serious obstacle to the work; fourthly, that the strata above the gray chalk and marl were so porous and traversed by open fissures that they allowed of the free access to water, both subaërial and marine, and therefore offered great difficulties in the way of the construction of a submarine tunnel which were not presented by the lower beds of the gray chalk.

Sir John Hawkshaw remarked, in the discussion that followed, that the water held by solid chalk was of no sort of consequence to the engineer. It would not affect the question of the tunnel at all. The only thing that would affect it would be water running along free fissures. Professor Prestwich pointed out that one difficulty which had been suggested was that the chalk might be penetrated by sand or gravel pipes, which descended from the surface to depths of 70, 80, and probably sometimes 100 feet, and carried down a large quantity of surface water. If one of those pipes were met with in traversing the Channel it would probably prove fatal to the progress of the work; but it was impossible that those pipes could reach to the depth at which the tunnel would be carried. Sir F. Bramwell said there was good evidence to show that the boring would be practically watertight throughout its whole length.

Mr. J. Fowler, on the subject of railways, said that an essential condition of the attainment of high speed on a railway is that the stopping places be few and far between. On the Metropolitan Railway no sooner has a train acquired a reasonable speed than the brakes have to be sharply applied to pull it up again. Sixty per cent. of the whole power exerted by the engine is absorbed by the brakes. In other words, with a consumption of 30 lbs. of coal per train mile, no less than 18 lbs. are expended in grinding away the brake blocks, and only the remaining 12 lbs. in doing the useful work of overcoming friction and atmospheric resistances. Comparatively high speed and economy of working might be attained on a railway with stations at half-mile intervals if it were possible to arrange the gradients so that each station should be on the summit of a hill. An ideal railway would have gradients of about one in twenty falling each way from the stations, with a piece of horizontal connecting them. With such gradients gravity alone would give an accelerating velocity to the departing train at the rate of one mile per hour for every second; that is to say, in half a minute the train would have acquired a velocity of thirty miles an hour, while the speed of the approaching train would be correspondingly retarded, without the grinding away of brake blocks. Could such an undulating railway be carried out, the consumption of fuel would probably not exceed one-half of that on a dead level railway, while the mean speed would be one-half greater.

Dr. Fleeming read a paper on Recent Progress in Electric Railways, and described Edison's railway at Menlo Park. Having said that Edison's method saved about 1 lb. of coal per hour per horse-power over the ordinary locomotive, Mr. Fowler, the president of the section, disputed this statement on the ground that Dr. Fleeming had assumed a consumption of 6 lb. of coal per horse-power per hour in the ordinary locomotive, whereas that was nearly twice the amount actually consumed; and Professor Forbes doubted that the alleged efficiency of the electric locomotive was as stated—90 per cent.—because no account had been taken of the internal resistance of the dynamo. Mr. Traill, who is at present engaged in constructing the largest electric railway in Europe—



namely, a seven-miles line in the north of Ireland—considered that the great advantage of the electric railway was the possibility of developing electricity from stationary steam engines, by which cheaper coal might be employed. In reply, Dr. Fleeming said that his figures respecting the consumption of coal in the locomotive had reference to the work of the ordinary locomotive.

Sir F. Bramwell gave a description of a self-contained tramcar, worked by compressed air, which is at present running from Doulon to Chantonay, by the river Loire at Nantes, and which is about to be introduced experimentally under his superintendence on the London tramway system. For the purpose of securing the necessary power to work the car on ascents on the tramway line there are certain air reservoirs, from which a reserve of highly-compressed air may be turned on at a moment's notice. The compressed air is pumped into the reservoirs at the terminal stations. Each car weighs  $6\frac{1}{2}$  tons unloaded, and is seated for nineteen passengers inside and fifteen outside. The air is compressed to thirty atmospheres above the ordinary atmospheric pressure. The consumption of fuel required to work a portion of the machinery on the car is about 12 lbs. per mile. The system worked admirably at Nantes.

Mr. F. J. Sprague, of the United States navy, in a paper on Edison's system, described all the details of that mode of electric lighting. On the subject of safety arrangements, he said that much had been heard about the dangers of fire from the introduction of electricity, but if the wires were properly laid, and means taken to cut out a circuit when for any reason there was an increase of current, there was no cause for apprehension. Edison had introduced, besides other precautions, a weak point in every main, divided, and subdivided circuit. This weak point was a bit of wire of lead and tin alloy, mounted in a plug and readily replaced when destroyed. In the event of danger the sudden increase of current fused this wire before it could possibly heat the copper conductors. He thought with Mr. Edison that storage batteries were not a necessary adjunct, and that with a large system of distribution by multiple and branch circuits the variation of light would be remarkably small, and failure in the street mains was practically impossible.

Mr. C. E. de Rance read the report of a committee of investigation into the circulation of the underground waters in the permeable formations of England, and the quality and quantity of the water supplied to various towns and districts from those formations; to which was added an appendix by Mr. Edward Wethered, on the density and porosity of rocks in relation to the water supply, in which the author set out by averring that a knowledge of the porosity of rocks was important as regarded the water supply, the suitability of stone for building purposes, and in accounting for some of the lithological changes often observed in the earth's strata. The vast volume of water stored in the rocks had not been fully realised. The density of the old red sandstone was 2.61, the volume of water absorbed by a cubic foot being 0.707 gallon, and by a square mile, 3 feet thick, 59,000,000 gallons. The conglomerate beds of the same formation were still more absorbent, being capable of taking in 0.805 per cubic foot, or 67,000,000 gallons to the square mile, 3 feet thick. The mill-stone grit which lay at the base of the coal measures varied much in different localities, that found in the Forest of Dean being the most porous, absorbing 66,000,000 gallons to the square mile, 3 feet thick. Some of the coal-measure grits also stored large volumes of water. The Pennant rock, about 900 feet thick in the Bristol coal-field and extensively developed in Somersetshire, as also around Swansea, was capable of absorbing 12,000,000 gallons in a square mile, 3 feet thick, and specimens of magnesian limestone taken from the neighbourhood of Bristol showed a porosity of 86,000,000 gallons; but the carboniferous limestone was quite the reverse, and only absorbed  $3\frac{1}{2}$  millions. Oolites held vast stores of water, and the rock was much used for building. Shallow well water had been classed by the Rivers Pollution Commissioners as dangerous, and the deep as wholesome; there must, therefore, be a purifying process going on during the percolation into the earth. Nothing in the chemical composition of the rock could purify the water, and to get rid of organic contamination there must be oxidation; and the oxidising agent, he thought, existed in the air absorbed by water, and in the air contained in the interstices of the rock.

Mr. R. F. Grantham read a paper on the Reclamation of Brading Harbour. Reference was first made to the attempt made by Sir Hugh Myddelton, in 1620, to enclose the harbour, an area of about 700 acres, uncovered at low water. The line of the embankment, as laid out by him, had been traced by the discovery of the piles of oak which were used by him. The attempt was successful for a time, but in a few years the sea broke in, and the land was again, until 1879, continually inundated at high-water. In 1874 a company, entitled the Brading Harbour Improvement and Railway Company, was formed, and in 1877 the work of constructing the embankment was commenced. The paper described the form of the embankment and the difficulties met with and failure experienced in closing it at the Bembridge end, and also gave particulars of the methods adopted in piling and planking the gap. The sea was shut out in July 1879, but in the following October again broke in. Further attempts were made to close the gap, and

at length the sea was finally shut out at the end of February 1880. The line of the present embankment enclosed an area of rather more than 600 acres. The works of lowering the sluices, the inverters of which were found to be at too high a level, and of the wharves erected at the St. Helen's end of the embankment, were also referred to, as well as the new channel in course of execution for the river Yar across the reclaimed land. The reclamation works would have the effect of improving the harbour, and opening up St. Helen's and Bembridge.

Lord Rayleigh read a paper on the effect of wind on the draught of chimneys, based upon experiments made with tubes and a fan driven by hydraulic power. He stated that a horizontal wind would usually promote a draught except in cases where the chimney opened out upon a large expanse of wall, and so was indirectly affected. The cure in this case was to carry the chimney higher. When the wind was inclined downward to the chimney at an angle of 30 degrees and upwards, there was a down-draught, and the maximum up-draught was produced by wind inclined upward at about the same angle. The simplest thing to prevent wind blowing down a chimney was to erect a T piece on the top. In that case a vertical or an inclined wind favoured the draught, and the effect of a wind blowing through the T tube was practically nothing.

In the remarks that followed it was suggested that the only real remedy was an increase of draught. A member contended that chimneys should be turned upside down, the opening at the fireplace being narrow and the outlet widened. If all the chimneys in a house could be made to open into a common cloaca a down-draught would hardly ever occur.

Dr. M'Donald, of Netley, read a paper on the perception of colour, dealing with the physiological changes in vision involving the phenomena of colour-blindness. Dr. Gadov, in calling attention to the influence of education in producing recognition of colour, instanced the fact that children when young are not usually correct in selecting colours placed before them, and added that, from the greater number of colour names in the English language compared with the German, the English are educated to a higher perception of colour than the Germans. He held that, to a certain extent, colour-blindness is an indication of deficient development of the power of mental perception.

Mr. R. Etheridge, in the course of his address in the Geological Section, said:—In Selsea I draw attention to a locality of extreme interest both to the geologist and archæologist, and where cause and effect are manifested in both investigations, the historical portion being based upon physical causes and changes that have long been and are still going on, to modify the form, extent, and structure of the Sussex coast, from the mouth of Chichester Harbour to Littlehampton and Bognor. The peninsula of Selsea is celebrated in English history as one of the places where Christianity was first taught in this country. It was one of the most ancient Saxon establishments. This peninsula was granted by Edilwalch, King of the South Saxons, to Wilfrid, the exiled Bishop of York, about the year 680. At that time it is stated to have contained 5,220 acres of land, with 85 families and 250 slaves. The parish now contains only 2,880 acres, 2,340 having been slowly denuded away by the action and encroachment of the sea. This encroachment and destruction during the past 800 years has been very extensive. The creek called Pagham Harbour, on the south-east side of the bill or peninsula, was due to an irruption before the year 1345, when 2,700 acres of land were destroyed. The site of the ancient cathedral and episcopal palace of Selsea, believed to have been situated to the south-east of the present church of Pagham, is no longer to be determined, but there is no reason to doubt but that it stood nearly a mile out in what is now sea. We are led to believe that when Selsea became known to the English nation it was an island, and that in Bede's time the process of silting up the estuary must have commenced; and the completion of this process would seem to have been before the Conquest. The action of the tides on this coast carries the sand and shingle from west to east, therefore the gradual wasting which has taken place on the shore of Bracklesham Bay has served to supply a large portion of the material of which these marshes are formed. The ground on which Selsea, Bognor, Littlehampton, Worthing, and other places on the Sussex coast westward of Brighton are built is of very recent formation, being composed of gravels, sands, &c.

The Merv oasis was described by Mr. E. O'Donovan, in a paper on Merv, as some forty-five miles in length from north to south and thirty-five in breadth. On the eastern margin of the oasis were the ruins of the old cities of Merv. The oldest was about 900 yards square; the ramparts were 40 feet in height—huge earth-banks, in fact. This city was destroyed by the Arabs A.D. 666. The next in age of the cities was Sultan Sanjar. The walls were in a good state of preservation; their circuit was about 2,500 yards, and in the midst of the enclosed space stood the lofty-domed mausoleum of Sultan Sanjar. The town was taken and ruined in the thirteenth century by a son of Genghis Khan. The third and latest city was destroyed nearly a century ago by the Bokharans. It stood close by, and was named Bairham Ali. A little to the northward were the remains of an extensive entrenchment called by the Turcomans Iskander Kala, or the Fort of Alexander. These ruins were entirely uninhabited.



## CONSTRUCTION OF TUNNELS AND BRIDGES.

IN the section of Mechanical Science, at the Congress of the British Association, the presidential address was delivered by Mr. John Fowler on the progress of railway, canal, and tunnelling operations. In the course of his remarks he said :—

The construction of tunnels was not one of the novelties presenting itself to railway engineers, for many miles of tunnel had been driven by canal engineers before a single mile of passenger railway had been built in this or any other country. To foreign engineers belongs the honour of having boldly conceived and ably accomplished tunnel works of a magnitude which would have appalled a canal engineer. Tunnels under broad navigable rivers and estuaries have been a subject of discussion by engineers for at least a century, but the only one at present completed is the unfortunate and costly Thames Tunnel. Two important works of the class are, however, now well in hand—namely, the Severn Tunnel at Portsoken, and the Mersey Tunnel at Liverpool. One lesson enforced by the Thames Tunnel was the necessity of leaving a reasonable thickness of ground between the water and the tunnel. In the Severn Tunnel the minimum thickness is 40 feet, and in the Mersey Tunnel 22 feet. The width of the river at the point of crossing of the former tunnel is  $2\frac{1}{4}$  miles, and the maximum depth of the rails below high water 163 feet. In the case of the Mersey Tunnel the width is nearly three-quarters of a mile, and the depth 144 feet. The Thames Tunnel, as almost every one knows, was carried on by means of a special contrivance termed by Brunel a "shield." No special appliances have been adopted in the case either of the Severn or the Mersey tunnel. Both are driven in the ordinary way, but of course enormous pumping-power is required and has been provided.

Where no special appliances are used in the construction of a subaqueous tunnel it will be clear that an unknown risk is encountered. All may of course go well, but on the other hand something may go wrong. In many cases of tunnels under estuaries, special appliances could be used which would obviate all risk and make the successful completion of the work a mathematical certainty. A tunnel over a mile in length now in progress under the Hudson River at New York is being driven through a silty stratum by the aid of compressed air, with a certain amount of success, as only some twenty men have been drowned up to the present time. The principle upon which the compressed air is used is, however, a false one, since it is merely forced into the tunnel with a view to uphold the ground by its pressure, like so much timbering, and not to keep out the water on the principle of a diving-bell. It is clear, therefore, that the completion of the Hudson River Tunnel, if the present system be persevered in, is purely a matter of conjecture, and all we can do is to hope for the best. The same remark applies, of course, to the Severn Tunnel and the Mersey Tunnel, although in those cases the character of the ground is such that the contingencies are small in comparison with those encountered in the construction of the Thames Tunnel and the Hudson River Tunnel. Nevertheless, unless special appliances of the nature of the pneumatic process be used, a subaqueous tunnel, whether it be the Channel Tunnel itself or one but a few yards in length, must necessarily present an unknown risk. The prototype of all these tunnels is the one commenced at Rotherhithe in 1809, which was successfully driven a distance of 900 feet under the Thames, and failed when within little more than 100 feet of the opposite shore. A tunnel about  $1\frac{1}{4}$  mile in length was commenced about ten years ago under the Detroit River in America, but was abandoned in a similar manner. So far good fortune has attended both the Severn and the Mersey tunnels, and there is, I am glad to say, every chance of its continuing.

Only a few months ago I became aware of the fact that a scheme, identical in all its main features with my Humber Tunnel project, had been suggested for adoption in the case of the Thames Tunnel, in lieu of the plan proposed by Brunel. Fifty-nine years ago a working smith named Johnson proposed to construct the Thames Tunnel without cofferdams by making it in parts 28 feet in length, each part having the ends temporarily stopped up, and being constructed on the same principle as the diving-bell. If another tunnel be constructed under the Thames, which is far from improbable, as the requirements of below-bridge traffic necessitate some such means of communication, it will be built in accordance with the plan suggested fifty-nine years ago by the working smith, and not on that of Brunel's Thames Tunnel, or of any other tunnel yet carried out.

A ferry still is the only means of communication across the Forth at Queensferry. Parliament, by the passing of the Forth Bridge Act during the present session, has given a practical recognition of the truth that the improvement of the Forth passage is a "national object." After consideration of the difficult problem, in concert with Mr. T. E. Harrison and Mr. W. H. Barlow, we unanimously advised the directors of the Forth Bridge Company to abandon the project of a suspension bridge, and to construct a steel girder bridge of the unprecedented span of 1,700 feet. The total length of the structure is  $1\frac{1}{2}$  mile, and it includes two spans, as aforesaid, of 1,700 feet, and two of 675 feet, over the navigable

channels on each side of Inchgarvie. The execution of the work has been intrusted to me, and my intention is that the Forth Bridge shall be not only the biggest, but the strongest and stiffest bridge yet constructed. Although great navigable rivers offer the most serious impediments to lines of communication lying at right angles to the direction of the stream, and necessitate such formidable undertakings as the Forth Bridge, with a clear headway of 150 feet above high water, and the Severn Tunnel, at a depth of 163 feet below the same datum, still it must be remembered that such rivers were the earliest and are yet the cheapest highways for inland communication. Antwerp, the third port in the world, ranking only after London and Liverpool, owes its commercial importance undoubtedly to the Scheldt, which affords admirable water-carriage for a distance of 60 miles from the sea-coast inland. London, similarly, is an inland port situated about 50 miles up the Thames; hence one-half of the distance between Antwerp and London is made up of fine rivers capable of being navigated by the largest ocean-going steamers. Unfortunately, the southern coast of England and the opposite coast of France are indented by no such rivers as the Thames and the Scheldt, or we should never have heard of the horrors of the "middle passage" in "cockleshell" boats, or of the Channel Tunnel.

In referring to the river system in Egypt, Mr. Fowler spoke of the Suez Canal, and when on this subject he remarked :—Far-seeing people, including the late Khedive, have long been of the opinion that another ship canal will be required in Egypt. In 1876 I submitted to his Highness, in accordance with my instructions, detailed plans and estimates for such a canal from Alexandria through Cairo to Suez. The total length of the canal was 240 miles, and with the same width as the existing Suez Canal, the estimated quantity of excavation was 160 million cube yards.

Mr. Fowler terminated his address with some observations on the practicability of establishing Channel communication by means of large floating stations, or ferry steamers, capable of traversing the narrow sea between England and France in little more than an hour.

## THE PRESTON GUILD.

A GREAT disappointment will be felt by the inhabitants of Preston by the announcement made on Tuesday that the Duke and Duchess of Albany would be unable to attend at the celebration of the Guild, more especially as everything has been prepared to carry out the festivity on a scale befitting the occasion. Preston, it appears, possesses no fewer than fourteen royal charters granting, confirming, and enlarging certain privileges to the burgesses. The first of which there is any record is one without date, granted by Henry II.; but from internal evidence it is clear that it must have been granted within ten years of his reign, between 1175 and 1185. This charter grants to the burgesses of Preston "all the same liberties and free customs" which had been given to the burgesses of Newcastle-under-Lyne; and these were that the town be "a free borough, and that the burgesses aforesaid may have a Guild Mercatory, with all liberties and free customs to such Guild appartenancing. And that they may go through all our land with all their merchandise, buying and selling and trafficking, well and in peace, freely, quietly, and honourably. And that they may be free from all toll, passage, pontage, stallage, festage, and all other customs." The witnesses to the Preston Charter are "G. of Ely, and I. of Norwich, bishops; Godfrey de Lucie, earl; William de Mundeville, Ranulf de Glanville, Hugh de Cressy, Ralf Fitzstephen, Bertram de Verdun, Hugh de Laci.—Given at Winchester." Soon after the grant of this charter the local rights, privileges, and immunities of the burgesses, as recorded in an ancient document named the "Custumal," and preserved along with the charters among the borough archives, were confirmed by Henry II. The Custumal is headed "Libertatis Prestonæ de Lege Bretonica." The first recorded Guild Merchant was held in the second year in the reign of Edward III. (1328), but, as in the orders made at that Guild, there is reference to the "orders of a precedent Guild," there is hardly a doubt that a Guild Merchant had been held in Preston many times before that date. It is known that such institutions are of Saxon origin, and Preston was a town in Saxon times, as is proved by its church, then dedicated to St. Wilfrid, being one of three that are mentioned in Domesday Book as existing in the hundred of Amounderness. There are records in existence of twenty-three Guilds, and of these the Corporation possess the rolls of nineteen, including a complete sequence of fourteen, and of the orders of each Guild from 1662 downwards. Up to the Guild of 1542 the celebration was held at irregular intervals, perhaps arising more from the disturbed condition of the country in the Middle Ages than from any other cause. Since that date, however, the Guild Merchant has been celebrated regularly every 20th year. There has been some difference of opinion as to the propriety of celebrating the Guild, the alteration of the municipal law in 1835 having rendered the legal portion of the ceremony unnecessary. There is a general attachment to the custom, however, though there is no longer any sort of commercial or social value in the "rights" of a freeman.



## THE PRESTON LIBRARY AND MUSEUM.

ONE of the incidents arranged for the forthcoming celebration of the Preston Guild was the laying of the foundation-stone of the Harris Free Library and Museum by the Duke of Albany on the 5th inst. The building owes its origin to the late Mr. Harris, who left 100,000*l.* for the erection and endowment of such a building. The site, which is estimated to be worth 30,000*l.*, is between the market-place and Lancaster Road. Mr. J. Hibbert, of Preston, is the architect of the proposed building.

In a report which accompanies his design he says:—If Greek architecture is to be retained in practical service, it is requisite, when opportunity affords, to present new combinations of its forms. For the purposes of a library and museum—a repository of knowledge, of examples of the arts, and of specimens illustrative of the sciences—its suitability will be admitted.

The building is to be three storeys in height, and will be faced on all four sides with ashlar stone. It is provided that the floors should be fireproof in their main construction, and that the rising mains and hydrants for extinguishing any fire that may occur shall be placed on each floor within easy access. The ground-floor is designed to accommodate collections of models and examples connected with the purely industrial arts; on it will also be the lending library and a reading and news room which will accommodate nearly 300 persons. The reference library will occupy the whole of the first floor. The museum galleries are to cover the whole of the upper floor, and will be lighted from the top. These are to be arranged round three sides of the central hall and staircase, one side being devoted to the fine arts, the corresponding side to natural history and physics, and the remaining side to the department of general archæology, ceramic and the finer kinds of industrial art, and illustrations of ethnology. The building is also to contain collections of fine arts and antiquities. According to the plans the staircase to the museum galleries is to be double, so as to regulate the up and down stream of visitors when the rooms may be crowded. With a view to make the interior of the structure as beautiful as it deserves to be, the architect proposes that the central hall and staircase shall be devoted principally to works of sculpture after the antique and later schools. He thinks that it may in that respect be rendered in some degree unique in a provincial town. In his report it is stated that the friezes and metopes of the Parthenon, of the Temple of Theseus at Athens, and the frieze of the Temple of Apollo Epicurius at Phigaleia in Arcadia, may not only be among the models presented of the best Greek art, but can be arranged so as to form the permanent architectonic decoration of those parts of the interior. Some of the finest works of Greek and Græco-Roman statuary, as well as of the later masters, in facsimile reproductions, may be purchased out of the funds immediately available.

## THE LATE MR. ROSSETTI'S WORKS.

MR. VAL PRINSEP, R.A., is at present in Manchester, at the request of the President of the Royal Academy, looking up such works by the late D. G. Rossetti as may be suitable for the proposed exhibition of characteristic pictures by this painter at the Royal Academy Winter Exhibition. Some of Rossetti's finest works have come to Lancashire, and not a few to our own immediate districts, says the *Manchester Guardian*. Mr. Frederick Craven has several of those beautiful subject pictures in water-colours which many judges consider among the most interesting works of our time. Mr. Mitchell has a fine oil picture entitled *Venus Verticordia*, and Mr. W. A. Turner has several of Rossetti's latest and finest works; but these have been so recently shown at the Royal Institution as to need no further notice. Mr. Charles Rowley, jun., has a large drawing in coloured chalks, a masterly study of Mr. William Morris, one of four that used to hang in the drawing-room at Cheyne Walk. Liverpool is fortunate in possessing the largest picture Rossetti painted, and perhaps his finest work. Mr. F. Leyland is the owner of a numerous variety of drawings and paintings, and Mr. Rae, also of Liverpool, has some of the early fine drawings similar in work and subject to those belonging to our townsman, Mr. F. Craven. It will be seen, therefore, that Lancashire will contribute a good selection to this important tribute to one of our greatest modern painters. If we reckon Mr. William Graham, of Major Street, as a Manchester man, our local contribution will be the most valuable in the collection, for Mr. Graham possesses more of Rossetti's finest later work than any other collector. The one other large work besides the Liverpool picture that Rossetti painted is one of his most poetic and thoughtful works. It is a triptych at Llandaff Cathedral. The central subject is inscribed *De Semine Davidii*, and shows a manger with the Holy Family, and a king and a shepherd hand in hand kneeling before them. Behind, in the openings in the wall, are seen angels looking upon the scene. The outer wings have each a figure of the Psalmist in his two characters of king and shepherd. These are inscribed *David Rex* and *David Pastor*. This is an early but lovely work, and should be shown with the others.

## DECORATION OF ST. GEORGE'S HALL, LIVERPOOL.

THE committee appointed to consider the designs submitted in competition for the proposed sculptured panels for St. George's Hall have decided to recommend the council to award the premiums as follows:—No. 1, 200*l.*, Mr. Thomas Sterling Lee, Chelsea; No. 2, 100*l.*, Mr. J. Milo Griffith, Regent's Park; No. 3, 50*l.*, Mr. W. S. Frith, Clapham Road.

According to the description of the models, the design of Mr. Lee represents Wisdom, Justice, Temperance, Orpheus, Tragedy, Comedy, and Astronomy. The author remarks that the parts of the building designed for the introduction of the sculpture naturally resolve themselves into four grand divisions or series, and may be grouped thus:—First series: The six panels on the left of the entrance to be devoted to the attributes and results of Justice. Second series: The six panels on the right of the entrance to be devoted to the causes and results of National Prosperity. Third series: The eleven panels at the north or concert-room end, nine panels of which are on the circular portion, to be devoted to subjects symbolised by the Nine Muses, and the two on the return flanks to be devoted to Orpheus, as symbolical of singing, and to Tubal Cain, as symbolical of harmony. Fourth series: The remaining five panels at the corners of the building to be devoted to subjects emblematic of the Arts.

The design of Mr. Griffith represents Jurisprudence, Mercy, Music, and Navigation, for large panels; Agriculture, Zoology, Painting, and Pottery, for small panels. The author proposes to execute the following subjects for the remaining panels:—Justice, Equity, Fortitude, Judgment, Instruction, Art, Science, Architecture, Astronomy, Chemistry, Commerce, Cotton, Electricity, Engineering, Geology, Industry, Poetry, Pottery, Sculpture, and the Drama.

Mr. W. S. Frith's design represents Justice, Education, Almsgiving, Painting, Music, Literature, and Agriculture. The author proposes the following subjects for the remaining panels:—Mercy, Truth, Faith, Eloquence, Freedom, Courage, Hospitality, Enterprise, Nursing the Sick, Sculpture, Architecture, Dancing, Astronomy, Chemistry, Commerce, Law, Invention, Engineering, Shipbuilding, Mining, and Weaving.

## ST. GERMAN'S CHURCH.

ON occasion of the excursion of the British Archæological Association on Monday, Mr. Brock read a paper on this church, in the course of which he said:—In 936 Conan was made Bishop of St. Germans, and in 986 Bishop Stidius placed the see and seat of his cathedral here, on the burning of the cathedral of Bodmin by the Danes, and here it remained until 1050, when the sees of St. Germans and Crediton were united under Bishop Leofric at Exeter. The building consists of a Norman nave and north and south aisles, two western towers which are not of the same design, and a fine Norman doorway forming the west entrance to the nave. The north aisle was demolished at the end of the last century. There were two statements made with respect to the structure which might be referred to for decision at their hands, since probably the building had never yet received so critical an inspection as it would undergo by their visit. The first was the statement made by Whitaker, who believed that the south-west tower and the south aisle alone formed originally the ancient cathedral of Cornwall. It might be allowed that the most ancient churches of the county were of small dimensions. There was almost always evidence that each time a church was dealt with, it was to enlarge it, but he confessed that, after a careful inspection, he could find nothing here to justify Whitaker's belief. The other statement was that of Lysons, that the south aisle was rebuilt in 1261, while Oliver, quoting from the Diocesan Registry, records that the church was consecrated August 28, 1261. Neither of these statements were, however, borne out by the structure. There was good Norman work of the twelfth century, Decorated of the fourteenth, and Perpendicular of the fifteenth, but hardly anything that could be assigned to the thirteenth century at all. He had pointed out elsewhere that the effect of a constitution of the Legate Otho in 1237 was to cause a great many churches which had not previously been, to be consecrated then; and was it not possible that the bishop of the diocese of that date, having reason to doubt that St. Germans had never been consecrated, it was then done? Some such supposition was necessary to account for its consecration at the date named. Mr. Brock further described the church, and ventured to say he had come to an opinion contrary to that generally received with reference to the comparative age of the east and west ends of the church. He considered that the west end was the earliest, and that the monolith granite pillars of the eastern part of the arcade were earlier than the freestone pillars of the western part of it. He knew that many archæologists believed that the Normans never worked in granite; but if the ancient Britons could work such wonderful interlaced crosses, the Normans would have been far behind them if they could not have made such simple pillars.



## HEXHAM ABBEY.

AN excursion was made last week by the Architectural and Archæological Society of Durham and Northumberland to Hexham Abbey-church, where a meeting was held in the transept, under the auspices of the president, the Rev. Canon Greenwell.

Mr. C. C. Hodges, the author of a monograph of Hexham Abbey, explained the result of the excavations made by himself on the site of the nave. He said his work would not be historical so much as archæological and architectural. There were men far better able than he to deal with the historical part of Hexham, and who, in fact, had dealt with it. He only intended to give a history of Hexham Abbey as it was shown by the stones of that church. The spot was of classical interest. He thought there had been a Roman town there, or at any rate there was a church in 674. He thought the nave of Hexham Abbey was never erected, and never was necessary. The transepts were larger than any other in England, compared to the size of the choir. The length of the church from end to end was 257 feet 3 inches. The reason of the transept being so long he could not find out. In the excavations that had been made they found two Norman capitals, probably belonging to St. Mary's parish church of Hexham, which was the only Norman work found in Hexham. The abbey gateway was built about 1200. The other old buildings were the Moot Hall and the manor offices, the first erected between 1346 and 1400, and the reason of it being to protect the market-place and that side of the town from any invasion. The walls of the manor offices were 11 feet in thickness. The dungeons were closed up, and had been so for a great many years. There was nothing to show that these buildings belonged to the abbey. In the time of Elizabeth they were used by the Keeper of Tyndall, and belonged to the Crown. Mr. Hodges then proceeded to refer to the history of the abbey. He said the president and himself were at issue as to whether Hexham was a Roman town or not. They had a large number of Roman stones in Hexham, and there must have been a large quantity in it when the Saxons were there. He did not think they were brought there, as they were not the same stones that were brought from Corbridge. Another strong point was that Prior Richard, in his history of Hexham, says there were remains of very magnificent buildings of great antiquity, and he would not say that if they were Saxon buildings. The Saxons would have merely a collection of thatched huts. In the crypt they had two Roman inscriptions. There were three Roman altars there; there had been five altogether. Two in the south transept were of the same stone as the Roman slab, found last year by Mr. Robson the clerk and himself in the excavations, of the Roman standard-bearer. There were a large number of Roman road stones lying about in Hexham in the fourteenth century. Mr. Hodges then referred to Hexham in the time of the Saxons. In 674, St. Wilfrid erected on that spot the Abbey. He believed St. Wilfrid erected it there because there were a great quantity of Roman road stones and building material to do it. After Wilfrid there was a succession of eleven Bishops of Hexham. The cathedral there died a natural death about 821 or 822. It was said it had been destroyed by the Danes, but as they did not come till 875 he did not think it was good evidence. The see was transferred to Lindisfarne. Hexham was in ruins, and when it became a bishopric again it was carried on by an abbot as its superior. From 875 to some time in the tenth century they knew very little of Hexham Abbey except that it was a parish church. The mediæval history of Hexham then began. A priory was founded, which lasted till 1538; it had a succession of fifty-six priors. There was nothing to show when the building of the present church began; and he had to fall back upon the architecture and arrive at the time by analogy. He thought 1185 was the date of the choir; it was built very slowly. He did not think the tower was built till 1270 or 1280. He could not find any masons' marks. When they got into the transepts they had different masons' marks altogether, and this showed there was a distance of time between the erection. In the aisles of the choir they had distinct transitional features. He thought the present church was wider than the Saxon church, a description of which they had by Richard. He would be able to show a piece of Saxon foundation in which was found a portion of Roman stone. The crypt was discovered in 1726 in erecting a buttress. In digging the foundation for the buttress the workmen got into the north passage of the crypt. It was a great "find" then; all the altars were there at that time. In clearing away the rubbish the other day from the floor of the crypt, Mr. Robson found a fragment of stained glass of the thirteenth century. There were found some pieces of pottery which the president thought were about the date of 1680. The size of the crypt was 13 feet 6 inches by 7 feet 9 inches, and 9 feet 1 inch in height. Mr. Hodges, after further describing the crypt, spoke of the attack on the Abbey by the commissioners of Henry VIII. at the time of the dissolution. The prior was hung at Tyburn. He next told the story of the priory from the time of the dissolution to the present, during the greater part of which time it had been used as a parish church. By the restoration there was a great deal destroyed. In 1760 one of the Blacketts erected a gallery in the church. From then till 1830 very little was done, but after that much destruction took place. In 1830, he said, a

heating apparatus was placed in the transept, and a great many slabs and grave covers were taken up, and many of them had been destroyed. Two shrines had since been swept away from the choir, and half of the stalls, the sedilia, and the beautiful range of chapels of the fourteenth century, which formed the eastern portion of the church, had shared a like fate. The restoration of 1869-71 greatly improved the transepts by opening out the western tower and lowering the floor to its original level, but it was to be regretted that the beautiful doorway made in the north transept by the Mercers' Company of London was at this time destroyed.

The President remarked that it was inconceivable to him that there should be a Roman settlement at Hexham, because it was so near to one of the most important settlements in Roman times in that part of the world, namely, that at Corbridge. He did not think the Saxons would trouble to provide stones for their buildings when they could get them already dressed from Corbridge. As to the statement of Richard, who lived about 1140, he might have referred to Saxon buildings which were erected in the eighth century as being of great antiquity.

## SILCHESTER.

AT the annual excursion of the London and Middlesex Archæological Society, a visit was made to the old Roman city of Silchester. Mr. James Parker, of Oxford, who was present, described the various Roman and other roads which approached Silchester or Calleva Atrebatum. He proceeded to point out that the history of Silchester, so far as recorded history went, was summed up in the attempt to find its name. Certain itineraries had come down to us from Roman times, the greatest being that of Antonine. In this, fortunately, four different routes mentioned a place called Calleva. In the thirteenth and fourteenth itineraries they found mentioned a place called Spinis, which writings still in existence identified with Speen, near Newbury; and Spinis was mentioned in the itinerary as the place where the road crossed the river; and a reference to that itinerary would help them in coming to the decision that Silchester was the ancient Calleva. He mentioned that because it was claimed for other places that they were on the site of ancient Calleva—for instance a book was published last year the main purpose of which was to prove that Calleva was Wallingford. In addition to the Antonine Itinerary, they had the Geography of Ptolemy, about A.D. 120 or 130, in which they found this—"Next to them the Dobuni, and their town Corinium; next the Atribatii and their town Kalkoua—or Calcova, which was a nearer approach to the spelling of the name Calleva than we sometimes found in reading of some places abroad at the present day, and was therefore strong proof in confirmation of Silchester being the ancient Calleva. But Henry of Huntingdon, writing in 1120-40, in copying the cities of the Nennions, had applied the names in the best way he could to such modern places as he knew. It shook their confidence in him that he put Silchester on the Thames. But why did he call that place Segont? He was acquainted with Cæsar's Commentary; and unfortunately in his day there were antiquaries, and he endeavoured to apply every name he met with to some place or another, and so, as he wanted to find a place for the Segontiaci, and he knew they were somewhere near the Thames, when he found the word Segontio in the Antonine Itinerary (which no doubt meant Carnarvon), he called Silchester Segont; and that was why he wrote that it was "on the Thames, not far from Reading," which as they all knew was very inaccurate. Every other writer had followed him. As ill-luck would have it, about 125 years ago, someone in digging in Silchester came across the words "Deo her Saegon t. Tamman saen Tammon vitalis Hono;" and of course that was laid stress upon as absolute proof that Silchester was Segontium, and not Calleva. Another theory had been started, that the place was once called Segontium, and afterwards Calleva; but the people who talked about that, if driven into a corner, were not satisfied which it was called first.

On the whole, he felt satisfied that they must come to the conclusion that Silchester was Calleva. Camden came to the conclusion that the place was called Vindonum, and placed Calleva at Wallingford. Camden spoke of creeping through "Onion's hole," and Gough took that as the name, and was immediately puzzled why "se" or "seg" was added, coming to the conclusion that the place was called Segonion for euphony. He (Mr. Parker) admitted that in a great many places he could not trace the Roman road which led to Calleva from London; but if they looked at the Ordnance map they would find that it ran as straight as possible as far as Staines, and it might be fairly traced to Silchester. Gough, commenting upon Camden, says "a military road called Lonbank, pitched with flints, runs from the south gate of the town to the north gate of Winchester;" and Man, writing in 1735, said he could trace the road distinctly from Silchester to Old Sarum. Dr. Beker, in 1804—and he quoted this just to show the sort of thing that was written on the subject—said that "no traces remain of any regularly drawn road from Silchester to Newbury," and made Calleva Reading, because of the name of Coley. Mr. Parker then went on to explain the plan of the Roman remains a



Silchester. If they walked round the wall they would find that they had walked  $1\frac{1}{2}$  miles and 30 yards; and, roughly speaking, the city was half a mile across. The Forum was very nearly, or quite, in the centre. Having given a slight sketch of the explorations which had been effected previous to 1864, and since that date, Mr. Parker pointed out that the best remaining portion of the wall was on the north side of the city, near the amphitheatre; and the work in the wall had been really magnificent. It was surrounded originally by a moat 30 feet deep. At the beginning of the last century the wall was in many places very much higher than it was at present, and showed traces of having been at least 9 feet thick throughout. They must remember—a fact which was too often forgotten—that from the coming of the Romans to the time of their leaving was at least as long a period as from the Conquest, say, to Edward, III., and that there were different stages in that history which were totally different one from another. It was too often forgotten that Julius Cæsar simply came over here, fought one or two battles, and made peace; came again, won, took hostages, and said he had conquered. When Claudius came in A.D. 40 he had to begin again; and there was no doubt the campaign of Aulus Plautius was very difficult, and gained no advantage from Cæsar having previously landed. That campaign merely settled one or two stations; and it was not until about A.D. 140 that the Romans got anything like a sufficient series of stations to call Britain in any sense their own. The history of the occupation of Britain by the Romans was much the same as the history of our occupation of India. He thought that the city of Silchester was more probably built in the third even than in the second century. Then the question arose, Why was it erected there? The probabilities were that it was a great central place, owing to its position in regard to the roads, and then arose the great *crux*—was it made on account of the roads, or were the roads made from London on account of Silchester? The roads were second-century roads; and he believed the city was built because of its central position in relation to them, so as to enable the heads of the different tribes to come up to pay their annual or half-yearly tribute—according to who was the Chancellor of the Exchequer in those days. No doubt very important documents and large sums of money were kept there, and, as in India, revolts might occur at any time, and the hordes rush upon the place, so that fortifications were necessary. It was not a city like London, which grew by degrees; but the walls were evidently built first, and afterwards the forum, temple, houses, &c., were built inside. His impression was that a great part of the eighty acres enclosed by the wall was never occupied at all. A large place was prepared for occupation, and if the Romans had not had to leave in 410, the chances were that by now that city would, like the city of London, have extended ten times farther on either side. It was not a military but a tax-collecting station, with a large forum in the centre in which the taxes were gathered and causes heard; though it no doubt possessed barracks for the soldiers who guarded the place.

#### EXCAVATIONS AT LEWES PRIORY.

THESE excavations have, says the *Sussex Advertiser*, been pushed on steadily during the last fortnight, and despite the huge accumulation of the *débris*, amounting to as much as 12 feet in depth in most places, which has had to be cut through, it is now possible to make out more or less accurately the disposition of the buildings whose sites have been excavated. The sub-structure of the dormitory, which occupies most of this area, is formed of a number of square chambers communicating with each other by wide single arches or double doorways. Most of these, however, have been filled in at some later period, but prior to the suppression, with chalk masonry, probably on account of some threatened collapse of the Roman work. The walls are in some places still covered with a most perfect coating of plaster—a mode of treatment far more prevalent in olden times than is usually supposed. By permission of the London, Brighton, and South Coast Railway Company, excavations have been made in the sides of the cutting through which the railway passes. These were most successful, resulting in the finding of the north-east angle of the refectory and the adjacent angle of the cloister. Behind these was uncovered an ample circular staircase or vice, corresponding in position with the one still existing on the south. It is to be hoped the railway company will cause these to be preserved to view and not covered up again. The line of the east wall of the cloister has been carried across the railway, and the continuation of it which formed the great south transept wall discovered in the bank. Similarly the north wall of the refectory has been opened out near the underground conduit, commonly known as the “lantern” or “prison.” It is now possible to ascertain the exact site of the cloister, and therefore of the nave of the great church of which a fragment of the west end was uncovered some years ago.

The Tower of St. Chad's Church, Stafford, which is in a dangerous condition, is to be completely restored, at an estimated cost of 1,400*l*. A gentleman in the town has contributed 500*l*. towards the amount.

#### ST. JULIAN'S WELL CHAPEL.

AT the conversazione at the Plymouth Guildhall on Monday Mr. J. Hine, F.R.I.B.A., read a brief paper on “St. Julian's Well Chapel, Mount Edgcumbe.” Mr. Hine said:—Probably the smallest and most ancient example of that curious and to some extent unexplained class of buildings, the Cornish well-chapel, is this little building at Mount Edgcumbe. Its internal dimensions are only 6 feet 3 inches by 4 feet 9 inches, and it was vaulted over by an equilateral stone arch formed by level bedded courses of masonry, with a central chamfered rib resting on moulded corbels. The doorway, or rather gateway (because there was no door), at the entrance end had also a pointed arch springing from the same line as that of the vault. The proportions are as simple as they are beautiful, and the details and character of masonry fix the period approximately as that of the early part of the fourteenth century. It appears not to have been thought essential that these well chapels should stand east and west, like our parish churches, and whilst St. Cleather Chapel follows that position, this little chapel is placed north and south. At the southern or fountain end is a niche, which probably contained a figure of the patron saint. In the western side wall, near the fountain, is another and lower recess, with an ogee chamfered head corresponding with the other. The jambs (existing) of the doorway, the rib and corbels of the roof, and the niches are of a green freestone from the parish of Landrake; the rest of the masonry is of more local stone. The pavement was of red and green glazed tiles, fragments of which we have found. This interesting little structure is being restored by its noble possessor and careful guardian—the Earl of Mount Edgcumbe. Cornwall has very many of these well chapels, some in a tolerably perfect state, others in ruins; many others have been barbarously destroyed. I am glad to hear that a Cornish antiquary—Mr. Couch—has made careful drawings and notes of most of them, which we may hope will one day be published. There is much yet to be learnt respecting them.

#### RESTORATION OF PORTSEA PARISH CHURCH.

AN appeal for funds for the restoration of this church has been made by the Vicar, the Rev. Edgar Jacob. The following is an extract from his letter to the *Times* of Tuesday last:—

Tuesday, August 29, will be the one hundredth anniversary of the loss of the *Royal George*. Of the nine hundred who perished on that sad occasion, the bodies of thirty-five were washed up by the tide and buried in the old churchyard attached to the parish church of Portsea (St. Mary's, Kingston). Two simple tablets, one a tribute from a stranger, mark the spot, but, like the churchyard in general, which contains many other monuments to gallant sailors, they show unmistakable symptoms of decay.

The historical interest is not confined to the churchyard. An old dilapidated tower, containing two bells that are cracked and four others which would bring the tower down if they were fairly rung, is all that now remains of a curious church, which would be an object of antiquarian interest if it had not been taken down in 1843; but the old font which, with the sexton's aid, I rescued and replaced in the church in 1878, when I became vicar of the parish, is the same in which two men, whose names are now historical, were, among many others, baptised early in the century. “On November 1, 1806,” to quote the register, “Isambard Kingdom, s. of Marc (*sic*) Isambard Brunel and Sophia his wife;” on March 4, 1812, “Charles John Huffham, s. of John and Elizabeth Dickens.”

A fund is now being started to enlarge the parish church by the addition of transepts and chancel, so that it may accommodate at least 1,500 instead of 1,000 people, to rebuild the tower, and to put the churchyard eventually into thoroughly good order. The work has been entrusted to an eminent architect, Mr. A. W. Blomfield; and a parochial meeting will be held on August 29 to consider ways and means. We are told that we shall require 10,000*l*.

**Railways in Australia.**—The Railways Construction Act of 1880 for the colony of Victoria sanctioned the construction of 487 miles of new lines. 389 have been made or are in course of construction. The surveys have been completed in every case, and in the course of the present month tenders are to be invited for the remaining lines scheduled in the Act referred to. On December 31 last 1,247 miles were open, and had cost on an average 14,800*l*. per mile. The original lines cost about 40,000*l*. per mile, but now the Government is able to construct at about 4,000*l*. per mile. The total cost of construction has been 18,750,000*l*. The total of the funds obtained to meet this expenditure is 28,487,000*l*, of which sum about 1,000,000*l*. remained unspent. From English capitalists 17,000,000*l*. of the total amount had been obtained, and 2,200,000*l*. from the proceeds of land sales. Since December last 46 miles have been opened, and 408 miles are in course of construction, making the total length open and in progress 1,701 miles. A new Bill provides for 56 new lines or extensions, to cost in all 2,433,194*l*.





### St. Paul's Church Competition, New Swindon.

SIR,—I should not have troubled you about this subject had not my name been mentioned by Mr. Vacher in connection with it. The nave and aisles, carried out under my superintendence, were consecrated on June 28 last year, but my instructions had been to prepare designs for the entire building. These complete plans were approved by the Ecclesiastical Commissioners as well as the Incorporated Church Building Society. When I saw the advertisement about the competition I was greatly astonished. I at once wrote to Mr. West, secretary of the Building Committee, protesting against the whole proceeding, which, moreover, I considered cast a slur on my professional reputation, so far as the outside public are concerned. Mr. West was good enough to reply that the committee who employed me had "long since dissolved, and the affairs handed over to an entirely new committee, who, on the grounds of equity to our own local architects, resolved to throw the work of the chancel, vicarage, &c., open for competition. I can assure you that no member of the committee had the remotest idea of ignoring you in the slightest degree." I was agreeably surprised to see Mr. Vacher's letter, for which I beg to thank him.

Your obedient servant,

15 Spring Gardens, London, S.W.: B. EDMUND FERREY.  
August 28, 1882.

### The late Mr. Edmund Walker.

SIR,—I have looked in vain for an obituary notice in your journal of the late Mr. Edmund Walker, of Maitland Park, N.W., an artist well known to architects, many of whom will be sorry to learn he passed away on the 9th inst., aged 68.

To his skill in water-colour drawing not a few of the leading architects of present and past days have been indebted for his highly artistic rendering of their perspective outlines, and they could always rely upon him for rapidity as well as excellence. His professional career is full of historical interest. Some forty years ago he had a lucrative practice in miniatures on ivory, and was well patronised. The daguerreotype process, followed by photography, destroyed that connection. He then visited many of the country seats in England, Chatsworth amongst the rest, and made local and finished drawings of the mansions, whose owners readily purchased them. Prior to 1851 he became connected with the then firm of Day & Son, and executed all those noted large interiors of the Great Exhibition of that year, first in water colours and afterwards in chromo-lithography. On his judgment and taste the late Sir Joseph Paxton, Sir Digby Wyatt, and Owen Jones largely relied for the effective placing of the principal objects in that Exhibition; and the late Captain Fowke engaged him for similar drawings for the 1862 Exhibition, but these were not published.

He was commissioned to paint the opening ceremony of the Horticultural Gardens, but as the Queen was prevented being present the picture passed into the hands of the then Baroness Burdett-Coutts. The first water-colour drawings of the Thames Embankment exhibited by Mr. Bazalgette in the Royal Academy, which all who then saw them will doubtless well remember, were by Mr. Walker, and it was not uncommon in those days for his work to be seen in a dozen or more drawings in a single year in the architectural room of the Academy exhibition. His artistic powers were versatile: buildings, landscapes, figures, battle scenes, and any other subjects were handled in a masterly way. All the sketches made by Mr. Simpson during the Crimean War were rendered by him as finished productions in chromo-lithography, and afterwards those of the Indian Mutiny, published by Messrs. Day & Sons. In the misfortunes of that firm he largely participated, a blow from which he never fully recovered. His gentlemanly bearing and refined feeling and honourable dealings, added to his ready apprehension of what was wanted, and his punctuality in keeping engagements, attached many architects to him very closely; and the profession has sustained a loss.

I remain, sir, yours truly,

2 Chancery Lane, W.C.: H. J. PAULL.  
August 24, 1882.

### Stratford-on-Avon Board School Competition.

SIR,—Will you kindly correct an error in the report of the above competition which appeared in your issue of the 26th inst. The author of the design sent in under motto "Experience," which was placed first by Mr. E. R. Robson, the professional assessor, but subsequently rejected because of the omission from the plans of the lines indicating the possibility of future extension, was not Messrs. Giles and Brookhouse, of Derby, as stated, but Mr. W. Hawley Lloyd, of 79 Colmore Row, Birmingham.

Yours truly,

Stratford-on-Avon: W. A. L. THOMPSON,  
August 29, 1882. Clerk to the said Board.

### Glasgow Municipal Offices Competition.

SIR,—In making a cube estimate of my design, to which the first premium was awarded in the first competition, I valued the whole at 1s. a cube foot, taking the height in the usual way from the bottom of foundations up to half the height of roof, the result being 150,432 $\frac{1}{2}$ . The towers were included in that valuation at the same rate.

Mr. Barry, in his report, said that he considered the estimate insufficient, and that it would require 220,000 $\frac{1}{2}$ , without reckoning the sculpture.

The author of the design now adopted estimated the basement storey up to ground floor at 9 $\frac{1}{2}$  a cube foot, thence to half the height of roof at 1s., and the towers above that level at 1s. 6 $\frac{1}{2}$ .

Mr. Barry considers this estimate sufficient.

I have not seen Mr. Young's design, but from the published descriptions it does not appear to be any less elaborate than mine.

If that is the case, Mr. Barry has evidently modified his views of the cost of building in Glasgow to a very considerable extent.

Yours truly,

G. CORSON.

### ENGINEERING WORKS.

**East River Bridge, New York.**—Marked progress, says the *Scientific American*, has been made toward the completion of the East River Bridge. The bridge is designed to carry three kinds of load—the outside roadways being for waggon traffic, the middle one for a promenade, with the railway trucks on either side of it, and between it and the roadways. The approach on the Brooklyn side differs from the New York approach in having iron street bridges at all of the streets. The New York approach has but one iron street bridge, and this is at Franklin Square. All the other streets are spanned by massive arches of masonry. The bridge at Franklin Square presents several engineering difficulties of more or less importance, for it is longest on the up-stream side, it is skewed at both ends, it is on an incline, and it must be adapted to three quite different kinds of load. The form and inclination of the bridge necessitates a great variety of fastenings, of different angles and shapes, and call for somewhat complicated calculations, and a large number of drawings. The total weight of metal in this bridge in round numbers is 1,000 tons. Of this, 1,658,279 pounds are wrought iron, 82,092 pounds steel, 27,440 pounds steel pins, 146,891 pounds cast iron. The width of the bridge over all, 88 feet. Length on the longest side 206 feet. Length of longest truss 198 feet 5 inches; length of shortest truss 163 feet 10 inches. The outside roadways will be 16 feet 7 inches wide between fenders. The two railroad-ways will be 12 feet each. The promenade will be 17 feet 7 inches wide. The parapet is of unique design, and harmonises with the character of the masonry parapet on the rest of the approach. The Brooklyn approach intersects, at an angle of about 45°, York, Main, and Prospect Streets, over which it is carried by wrought-iron bridges composed of riveted plate girders. The bridges rest upon stone abutment walls, and have a grade of 2·8 per cent. The York Street Bridge consists of six single-web riveted plate girders, 9 feet deep and 85 and 86 feet long, having lattice cross-girders riveted to them, these latter supporting longitudinal rolled floor-beams. Buckled plates cover the outer floor-beams, and are riveted to them. The bridge seats are 42 feet above the street level. The Main Street bridge is similar to the York Street bridge, and is about the same length. The mean height of the bridge seats above the level of the street is 22 feet. The approach where it crosses Prospect Street is curved, the mean radius being 260 feet. The Prospect Street bridge has six continuous girders, 2 feet 6 inches high, in three spans, one continuous girder in two spans, and six single girders. The continuous girders are parallel to each other, but the other or outer girders are placed so as to conform as nearly as possible to the curve of the approach. The cross girders of this bridge support, as in the other bridges, the longitudinal rolled floor beams. This bridge is supported by two stone abutment walls and two rows of columns, located at the curb lines of the street. All the girders of this bridge, both main and cross, are of the single-web riveted plate type. The total weight of metal in the street bridges of the Brooklyn approach is as follows:—York Street bridge, 561,338 pounds; Main Street bridge, 551,342 pounds; Prospect Street bridge, 185,430 pounds.

**American Railways.**—Mr. West, her Majesty's Minister at Washington, reports that the extension of the railway system in the United States in 1881 has been greater than in any previous year. During the year 1881, 9,358 miles of railway have been built. The cost, at 25,000 dols. per mile, is reckoned at 233,950,000 dols.; expended on lines in progress, 75,000,000 dols.; expended on old line, 100,000,000 dols.; total, 408,950,000 dols. It is expected that the mileage to be opened in 1882 will equal that of 1881. Up to June 1, 1882, 3,677 miles of line were opened, against 1,734 for the same period of 1881. Although this increase will not continue, it is likely that the mileage opened this year will not fall short of 10,000 miles. The railway mileage rose from 52,914 miles in 1870 to 104,813 miles in 1881. At a similar rate the mileage in 1890 will exceed 200,000 miles.



## ARCHÆOLOGY.

**Sandown Castle.**—Instructions have been issued for commencing the work of removing this structure. The masonry is to be removed to the Constable's Tower at Dover Castle, to be employed in the construction of a residence for the General Commanding the South-eastern District, so that the new residence may be more in character with the appearance of the ancient masonry of the castle than would be the case if new stone were used. The amount of material to be removed will exceed 600 tons. The sea has been allowed to encroach, and for many years past the network of subterranean corridors has been filled with shingle, and subject to the destructive action of the sea waves. The plan of the castle may still be very distinctly traced, and with the exception of the southern portion of it the moat still exists. The outer portion of the masonry is of Kentish rag, the interior being of dressed Portland stone. The castle was constructed with four round bastions of thick arch-work with numerous embrasures. From the centre rose a round tower, having a cistern at the summit, and beneath an arched bomb-proof cavern. The walls are about 20 feet thick at the foundation, gradually diminishing as they rise, the summit having originally been about half that thickness. One of the principal historical events connected with the history of the castle is that during the reign of Charles II., Colonel Hutchinson, who had been a member of the Long Parliament and governor of Nottingham Castle, was a prisoner within its walls, and died there in September 1664.

**The Metopes of the Parthenon.**—Mr. C. T. Newton writes:—"I have from time to time noted in the *Academy* the discovery of new fragments of the pedimental sculptures, metopes, and frieze of the Parthenon. I have now to announce a very important addition to a metope which has just been made by Dr. Charles Waldstein. In a recent visit to the Louvre he observed a male head corresponding in scale and style with those of the Lapiths in the groups of the metopes. Having obtained a cast of this head, Dr. Waldstein brought it for examination to the British Museum. It was at once identified as the head of the Lapith in the metope marked No. 6 in the Guide to the Elgin Room ('Museum Marbles, vii. pl. 3; Michaelis, Parthenon, pl. 3, vii.'). The head of the Centaur in this group, which is at Athens, had been previously identified. By the addition of the head of the Lapith, his antagonist, through Dr. Waldstein's happy discovery, the metope has gained immensely, and seems animated with new life and spirit."

## GENERAL.

**Sir Frederick Leighton, P.R.A.,** left England on Tuesday for a tour in the East. He purposes visiting Constantinople and Jerusalem, and subsequently the seat of war in Egypt.

**Mr. M'Whirter, A.R.A.,** is at work on a large picture of the village of Corrie, in the Island of Arran. The white cottages nestling under the green hillside, and the sea driven on the rocky coast by a south-east gale, will doubtless furnish him with a congenial subject.

**Sir J. A. Macdonald,** Minister of the Interior, Canada, in his annual report, presented to the Dominion Parliament during the last session, says that satisfactory progress is being made by the Survey Department, 9,000,000 acres having been laid out into townships and subdivided into sections and quarter-sections during the year. The amount of field-work in this may be judged from the fact that it involved the demarcation and measurement of over 23,000 miles of survey line.

**Sir J. H. Ramsay** has continued his investigations on the national finance in the fourteenth and fifteenth centuries, and has contributed an article on the accounts of Henry IV. (in continuation of a former one on the accounts of Richard II.) in this month's number of the *Antiquary*.

**Mr. John Gee,** of Macclesfield, has accepted the tender of Mr. W. F. Mason, engineer, Longsight, Manchester, for one pile of Jennison's patent smokeless Decker baking ovens.

**Mr. W. H. Smith, M.P.,** has just lent his portrait of Lord Beaconsfield, by Mr. Millais, to the Art Department of the Worcester Exhibition.

**Charles Sohn,** artist, of Dusseldorf, has been, it is stated, commissioned by the Queen to furnish portraits of the Prince of Wales and his family to King Cetywayo.

**King Ludwig of Bavaria** has granted a concession for an International Art Exhibition in 1883. The perfect success of the last is ascribed to be largely due to the contributions of the English painters in water-colours.

**The Hove Commissioners** have had under consideration reports from the town surveyor and from Sir John Coode in regard to the encroachment of the sea on the eastern part of the foreshore. Sir John Coode recommended the erection of a sea-wall and six new groynes, at a cost of 15,000*l.*; but the suggestion of the surveyor, proposing the erection of three new wooden groynes, at a cost of 2,800*l.*, has been adopted.

**The Education Department** have signified that school accommodation must be provided for about 2,000 children at Birkenhead within six months' time, failing which a School Board will have to be formed for the district.

**Plans** have been prepared by Messrs. Hine & Odgers, of Plymouth, for new Wesleyan Sunday Schools at Bodmin.

**A "Fantasye Fayre"** was opened on Wednesday at Scarborough, in aid of the fund for the erection of a new church. A plan by Mr. C. Hodgson Fowler, of Durham, has been approved of for the church, the estimated cost being about 3,000*l.*

**Thames Bridges.**—Workmen have begun to remove the aqueduct across the river at Putney to allow of the erection of the new bridge, the temporary bridge which carries the water-pipes by the side of the old wooden bridge having been completed a short time ago. The bridge is to be completed in five years. Hammer-smith Suspension Bridge is to be closed for two years during its reconstruction. Ferry-boats are to be provided by the contractors for the convenience of the inhabitants.

**The Worcester Music Hall,** which was destroyed by fire, has been reopened after being restored and enlarged at a cost of nearly 5,000*l.* Messrs. Wood & Sons executed the work, under the direction of Mr. Rowe, architect.

**M. Gaillait,** a Belgian painter, has declined to receive the medal awarded to him by the jury of the International Exhibition at Vienna, on the ground that works of fine art are incapable of being classified and distinguished like mechanical products.

**The Metropolitan Board of Works** have decided to postpone the enlargement of their sewage reservoirs at Barking Creek and Crossness in deference to the Royal Commission to inquire into the pollution of the River Thames.

**A New Commission on Historical Manuscripts** has been gazetted. The object of the Commission is to "call in the aid and co-operation of all possessors of manuscripts and papers, and to invite them to assist in furthering the objects of this Commission, giving them full assurance that no information is sought except such as relates to public affairs, and that no knowledge or information which may be obtained from their collections shall be promulgated without their full licence and consent."

**The Gift of a Site** and 6,000*l.* on the part of an anonymous donor towards the proposed new Infirmary at Stratford-on-Avon, was announced at the annual meeting of the Governors on Monday.

**The Publication** of a curious collection of London signs of booksellers, publishers, and printers, up to the end of the seventeenth century, is commenced in the September number of the *Bibliographer*.

**The Electric Light** is being introduced in the town of Cleethorpes, near Grimsby. There are to be five large arc lights, four of these being along the cliff which overlooks the sea, and forty-two small incandescent lamps of the Lane-Fox pattern. The light is to cost the parish 130*l.* a year.

**An Art and Industrial Exhibition** has been opened at Amptill. Valuable paintings and works of art have been lent by the leading county families for the occasion.

**The "City Press"** states that it has been determined to reopen the Bank of England entrance in Princes Street, which has been closed for nearly half a century. The solid masonry and brickwork which have for so many years hidden the massive gates from view inside the building have been removed, and shortly those having business to transact in the vicinity of the office of the secretary will be able to do so without having to perambulate numerous passages and corridors.

**The Autumn Exhibition of the Royal Birmingham Society of Artists,** which opened on Monday, is pronounced to be the finest collection of pictures ever shown in Birmingham. The Committee have hung 782 out of the large number of works submitted, which fills up all the wall space available.

**The Paris Fortifications.**—In the event of the measure brought forward by a member of the French Chamber for the razing of the fortifications which encircle Paris being carried, the area of land rendered available for building purposes will be little short of five million square metres, as the fortifications, which have a circumference of 33,165 metres (nearly twenty-one miles), are 142 metres broad. In addition to this, there is a zone of land 250 metres broad outside the fortifications, which is retained by the Government for strategical purposes, and which cannot at present be built over, except upon the express understanding that the Minister of War shall be at liberty to demolish the houses, &c., whenever he may think fit. This "zone of military servitude," as it is termed in French, covers 8½ million square metres, making a total of 13,560,000 occupied by the fortifications. The value of this land, estimated by M. Thiers at 560,000*l.* when the fortifications were erected in 1840, is now put at about 2,800,000*l.* The value of land is still rising, and as the number of houses in Paris has increased from 71,873 in 1876 to 82,352, and as despite this addition to the number of houses the average number of inhabitants to each has increased from twenty-six to twenty-eight, it is very evident that the land now occupied by the fortifications will soon be built over if the Chambers decide that they shall be razed



# The Architect.

## SMALL SUBURBAN HOUSES.



SO very many people are interested in the occupation of the various kinds of small houses, that the contrivance of their arrangements ought to be perhaps the most important of all architectural subjects, but for the quiet and accommodating character of the inmates. The comparatively few who have the happiness of being able to live in habitations of higher class are not so quiet and accommodating. We might almost say, the better the house, the louder and more unreasonable are the complaints about it. To hear and read the denunciations of the dwellings of the upper ten thousand which are so common, a stranger to the peculiarities of English civilisation and the freedom of English opinion might be excused for supposing that our architects and builders must be literally the most astonishing blunderers that the world has ever seen. Indeed, he might feel not quite sure whether their misconduct is not intentionally malicious, or at the least so grossly negligent that the suggestion might seem only reasonable which we remember to have been made by a lively writer on the subject a year or two ago, apparently in all sincerity, to the effect that persons offending professionally against the doctrines he was advocating ought to be laid by the heels in the House of Correction. It may be a relief, therefore, to some of our readers, surfeited with the woes of rich householders, to turn to the condition of a humbler class.

A spirited little work, published recently under the title of "Our Homes, and How to make them Healthy," in giving an account of the small suburban house—that is to say, "an ordinary house of perhaps 30*l.* per annum rent, in any one of the new thickly-populated suburban districts which a few years ago were lanes and fields"—describes it in the following racy manner. We shall be obliged to translate somewhat freely, of course, and, indeed, to help out the writer in a way which, with amateur critics of building, is always desirable; but the reader will see that there is no need for exaggeration even if we were disposed to indulge in it.

The front door of our small suburban house, says this author, leads into a "hall" 3 feet wide at the utmost, which, but for the door being sometimes open, is generally devoid of both light and air. In those rare instances in which the gloom has been diminished by the introduction of a fanlight over the door, this is fastened up, and so made at least secure against that ventilation which would otherwise try to reach the passage and the staircase. The front parlour has a bay window, which, it is true, by means of flower pots, might have a pleasant effect, were it not that the mouldy smell and the stained walls are (in an uncomplimentary sense) much more attractive to the visitor. The cause of the mouldiness and damp is well known; the eventual effect is dry rot; a damp-course is then inserted at a disproportionate cost, and the ground under the floor dug out and a bed of concrete laid down. The back parlour is wofully restricted in width, as in outlook, for the sake of a wing behind, which contains the kitchen. This kitchen is made of the smallest size and of the lowest height, because of its greater need of ventilation. Swarms of black beetles, however, obtain access from innumerable crevices in the floor and the plaster. When these confiding guests are inhospitably slaughtered, the process of their decay makes matters only worse; and no one seems ever to think of putting down even a floor of concrete or of wood-bricks to keep the beetles out. The scullery is only a dark and damp recess containing a sink. Side by side with it we have a water-closet and a larder; and these incompatible conveniences have "carefully-arranged facilities for ventilating the one into the other." A few feet off is the dustbin, and the ground floor is complete. Upstairs are the bedrooms of the establishment, with not unfrequently a bathroom. "Care has been taken to render them as pervious to rain, and as susceptible as possible to changes of temperature." The staircase, also, not only is squeezed together to a miserable minimum of size, but it is made expressly dangerous to life and limb by being formed almost wholly with

winding steps, besides being nearly perpendicular. "The utter disregard of the possibility of a house of this kind being ever inhabited by children is a curious and noteworthy fact." The need for cupboards is especially ignored. There is, again, an "utter disregard of the simplest possible rules of sanitary science in the drainage arrangements." Lastly, "notwithstanding the complaints which assail the builder on all hands," the whole misadventure is repeated and perpetuated without remorse; and this is a fair description of a small suburban house.

Now, with all respect for one who is evidently as earnest a philanthropist as such writers generally are, however deficient in information and judgment, we cannot help saying that this is by no means a skilfully drawn picture, or even an intelligent statement. True, 30*l.* a year is a low rent, especially if 6*l.* of it has to go for the ground, as it often has, if not more. The building outlay cannot well be much more than 250*l.* by the time the lawyer and surveyor are paid for procuring the money and controlling its expenditure; to say nothing of the circumstance that all the materials have to be got at prices which, in spite of the most parsimonious administration, must be considerably augmented on account of doubtful credit and more than doubtful risk. Even at fivepence per cubic foot it is questionable whether the accommodation described could be squeezed in anyhow, especially if the house—we will not suppose it to be a semi-detached villa—has its little iron railing in front and its little "back-garden" behind. But instead of wasting time in the vain endeavour to imagine what a house worth only 30*l.* a year ought to be, let us describe what is actually being built in the suburbs of London for a slightly higher rent, and we think it will be the opinion of most readers that our speculation builders, instead of being hastily charged with incorrigible and wilful obtuseness and perversity all round, may be complimented just now upon their manifesting here and there, in fair rivalry with each other, what promises to be the beginning of a much improved practice in small houses.

In the first place, the damp course and, where necessary, the concrete bed under the floor, are now compulsory by law, and so far the public surveyors can take the direct responsibility of preventing the neglect of those important primary precautions. But we have reason to hope that the still happier effect of legislation in this direction will be to cause builders to understand for themselves the reason why the new law has been made, and of their own accord to attempt even more than the law can strictly compel them to do. Better bricks and better mortar are also being used, for the same reason that the legal regulations have now been made more clear. The drainage, again, is much better ordered; and the sanitary plumbers are vastly improved. All this, moreover, is accomplished without the need of involving the speculation in any material increase of cost. Regarding the mere plan of the house, it is impossible to do otherwise than constitute a front room and a back room the leading features of accommodation; and where there is no basement (an important point in respect of household economy in such small establishments), there is nowhere else to put the kitchen except at the rear as a wing. It is idle to despise and ridicule this simple plan, for such simplicity is the outcome of experience and the test of merit. But what we now discover, if we go to the proper quarter, is the introduction of a certain amount of that ingenuity in the details of accommodation, without compromising the principle of plan, which makes all the difference in such matters between the silk purse and the sow's ear. Instead of the dark passage or the fixed fanlight, there is a somewhat elegant entrance door with ornamental glass panels, sunk in a little recessed porch which adds both convenience and elegance of its own; and, in any one of half a dozen ways, the staircase is not only easy of ascent and descent, but well lighted, and, if no wall window can be had, sufficiently ventilated by some other means. The little kitchen is sometimes a miracle of neatness, and its appurtenances and appliances, although on the smallest scale, are almost laughably complete and inviting. The tiny forecourt and the tiny garden behind, actually capable of cultivation both, are in their way perfect; and the tile pavement up to the front door—we beg its pardon, the porch—and the little bit of asphalt paving at the back door, or rather the garden entrance, add final touches of grace to the *ensemble* which are worth ten times the money. It is lamentably true that the coals have frequently to go in through our elegant porch, and the dust to come out by the same way; but there are several ways of avoiding this if a little more land or a little more



money can be allowed; in either case, of course, meaning a little more rent. Then the dining-room—emphatically not the “front parlour”—is easily enough made fit for a prince, if it were large enough, with its nice bay-window, its fashionable wall-paper, dado included, cornice and ceiling in tints *à la mode*, joiner’s work to correspond, and floor margin stained and waxed, every item all the more charming that it is cheap. The “back parlour” of old is the library—sometimes indeed the drawing-room—and equally full of undeniable little graces. Nor are the bedrooms any longer of the anyhow type, with thin framed partitions, halfpenny papers, partnership windows, and so on, often chimneyless, always corniceless, and too frequently with no place at all for the bedstead except across the fireplace or under the window; but, granting their small dimensions in cases where this cannot be helped, they are as snug and pleasant as if they were in a palace. The bath-room—with a surprisingly short but quite efficient bath, and just room to turn in besides—has its polished mahogany frame, marble washstand, plated mountings, varnished paper, proper sash-window, and—what more could any one desire? Cupboards there are throughout, notably one of them as a formal linen closet; the stoves are of the latest invention as well as of the smallest size, and the range is a model; the chimney-pieces are sometimes almost too neat; and the fastenings and “furniture” are good instead of bad. For 40*l.* or 50*l.* a year such a dwelling as this can now be had almost anywhere round London, and no doubt for about 30*l.* one of the same pleasant order of thoughtful design, a little more limited in accommodation and finish. In many cases, we may add, the hand of the skilful architect is plainly to be seen; and if in others it is not so, this seems to be only a matter of fallacious economy which time is sure to mend.

We are therefore proud to be able to compliment our smaller builders on the spirit of enterprise in this important direction which is now animating them, and we confidently expect to see their work more and more improved as the public taste improves—which it is doing every day.

### INDUSTRIAL ART EXHIBITION AT GHENT.

A VISIT to the Flemish city of Ghent seems to take one back directly into the Middle Ages, and the statue of VAN ARTEVELDE, by DEVIGNE-QUYS, in the Place du Vendredi, is so full of fire as to almost recall the famous speech in which, in 1344, he succeeded in persuading the burghers to take part with England against France. The birthplace of JOHN of Gaunt, time-honoured LANCASTER, was, during the reign of CHARLES V., the most populous town in Europe, thus warranting the Emperor’s celebrated pun to FRANCIS I. of France, “Je mettrai votre Paris dans mon Gand (gant).” The Cathedral of St. Bavon, which has the most highly ornamented interior of any church in Belgium, contains four large brass candelabra bearing the English arms, which were probably purchased from St. Paul’s, London, during the Commonwealth. The Hôtel de Ville possesses a picturesque façade in the flamboyant Gothic style; built between 1481 and 1533, after the plans of D. VAN WAGHEMAKERE and ROMBONDT KELDERSMANS, and is perhaps the finest specimen of its kind in the country. The *beffroi*, or belfry, which, according to an endorsement on the original plan still preserved in the city archives, must have been begun in 1183, is surmounted by a gilt brass dragon, 10 feet long, taken from Constantinople by BALDWIN IX. during the fourth Crusade, and now serving as a weathercock. It was from the top of this tower that CHARLES V. uttered another memorable pun on the name of the city. When the cruel Duke of ALVA urged him to destroy the proud city that had given him so much trouble, he asked, by way of reply, “Combien faudrait-il de peaux d’Espagne pour faire un gant (Gand) de cette grandeur?” The *carillon* consists of forty-four bells, one of which was pierced by an Austrian cannon-ball in 1789, but without its tone being injured. The old gateway of the castle of the Counts (of Flanders), not far off, dating from 1180, is another interesting relic.

Ghent was early distinguished both for its fostering of art and for its manufacturing enterprise, and the members of the *Chambre Syndicale des Arts Industriels* are worthily carrying out the high mission handed down to them from the ancient guilds. In 1877 they held their first exhibition of industrial art in the University, and have instituted each year subse-

quently various competitions with the object of infusing beauty into articles of everyday life. This year, besides the usual competitions, they have organised their second exhibition, which was opened on August 28 in the Casino, and will be continued until October 16. The handsome building, which was erected in 1836, having an iron roof, lighted from above, and painted entirely white inside, admirably sets off the treasures it contains. A large palm tree and ferns in the centre are surrounded by the busts, contributed by the *Compagnie Générale des Bronzes*, of men famous in art-history. There are JORDAENS and VAN RUYSBROECK the painters, COLIN the sculptor, and CONSCIENCE the Flemish novelist, alternated with modern *chefs-d’œuvre*.

The exhibition is divided into two parts, Ancient and Modern. The retrospective portion is restricted to objects, anterior to the nineteenth century, connected with Belgian or foreign art, and includes some rare gems. There are tapestry, silver plate, porcelain and pottery, ivory and oak carvings, miniatures in enamel, caskets, cabinets, locks and keys, hinges and escutcheons, arms, fenders, dogs and fire-irons. What attracts the most interest, however, is the reproduction, with the actual articles of furniture and utensils, of an old hall. The fireplace, bearing the date of 1534, has its iron back-plate and elaborately-forged dogs, terminating in baskets for containing the hot embers. The tongs, warming-pan, and lanthorn are evidently of the same period; while the carved and leather-seated chairs are thoroughly in keeping. It is almost worth a visit to Ghent if only to see this old fireplace.

The modern portion of the exhibition is subdivided into five sections, viz. (I.) Building; (II.) Furniture and Decoration; (III.) Metal-work; (IV.) Textile Industry; and (V.) various industries; in all of which silver-gilt, silver, and bronze medals will be awarded by the jury. The Building section includes (1) ornaments in stone, carton-pierre, plaster, and artificial stone, such as decorative groups, consoles, balustrades, pedestals, &c.; (2) natural and artificial marble-work, and marble, mosaic, ceramic, and cement pavements; and (3) joinery, including doors, parquetry floors, &c.

A few of the objects may be noted. In Brussels and other towns of Belgium holes are left in the walls of houses, just under the eaves, to receive poles from which to suspend a scaffolding for the yearly painting or lime-washing of the fronts; and these holes are generally filled up by ornamental plugs, which rather improve than detract from the appearance. M. CH. LABEEUW, of Laeken, near Brussels, shows some lions’ heads, with their framing, executed in compressed cement, forming a good arrangement for this purpose. M. GUILLAUME MEWIS, Brussels, who obtained an industrial decoration in 1880, sends three small but well executed busts in terra-cotta, representing Spring, Summer, and Winter; and M. VAN WEYDEVELDT, professor at the *Ecole Industrielle*, Bruges, contributes three plaster ornaments modelled by the pupils.

The exhibits in the second group are almost entirely confined to paving-tiles and marble mantelpieces. Of the former, LÉON DE SMET ET CIE, Ghent, show a trophy with every variety of paving-tiles in compressed and polished cement, with the portions forming the pattern let into the body of the tile. Near it M. TH. COCQUIT, Ghent, shows his new and patented moulds, dies, and press for producing such tiles. MM. DAMMAN and CASSARD, Brussels, show specimens of a new flooring, for which they justly claim many advantages. In the first place, a floor of hard flags, with conical holes, is laid in cement. On this is spread a damp-proof substance, in which the portions of wood forming the parquetry are laid, having grooves formed in their underside, constituting a dovetail which keys the whole together. There is then no space left for rats, mice, or insects: and the noise of footsteps is deadened. This flooring is laid, among other public buildings, at the new Palais de Justice, Brussels, which is now fast approaching completion. Among many mantelpieces must be mentioned those of M. J. J. LEFEBVRE, Ghent; two in black marble, Renaissance and Louis XVI., by M. CRAB VAN DEN BOSSCHE, Brussels; one in black and blue marble, Renaissance, by M. J. DE VRIESE-ROMYN; one of black marble inlaid with Italian griotte, by M. L. PARMENTIER, Basècles; and another, handsome in its plainness, executed in the blue stone, or “petit granit,” of the country, Flemish Renaissance style, by MM. TRIGALET and DELTENRÉ, of Ecaussines. There are but few entries in the third group of building, joinery; but M. E. SUY, Ghent, shows a good specimen of forty veneers cut in an inch thickness by his special system.



As Section II., Furniture and Decoration, lends itself so readily to effective display, it is naturally the best filled of any. In the first group (decorative painting on stone, wood, and cloth, and imitation of wood and marbles) there are thirty-five exhibitors, who show, for the most part, panels painted in imitation of Gobelins tapestry. M. J. ALLO, of Brussels, also sends a composition in this style for the space over a mantelpiece. M. G. CAMBIER contributes a remarkably spirited painting on cloth, illustrating a "*Prælium tauri in circo Romano*;" but it is killed by the glaring ecclesiastical figures of another exhibitor injudiciously arranged just in front. M. JULES LEFEVRE, of Ghent, exhibits reproductions of VAN ORLAY'S *Grotte de Calypso* and TENIERS' *Rainbow*, with a border for imitation Gobelins tapestry, intended for the Amsterdam Exhibition of next year. M. CONSTANT MONTALD sends designs for the painted roofs of a theatre and a concert room.

The second group, Cabinet-work, is rich in meritorious works. M. F. ALLEWAERT, of Ypres, exhibits a cabinet of solid ebony, inlaid with ivory and various woods, with painted panels, valued at 140*l*. M. BEAUFAYS, Ghent, sends an oak table, with parts inlaid with the same, but with the grain running in a different direction; while a sideboard is similarly ornamented besides being carved. M. L. BLANCHART, of St. Denijs-Westrem, sent an oak "*dressoir*," desk and chairs, simply *caré*, but with the elaborate hinges fixed over red-cloth showing an edge, which produces a good effect. M. VAN ASSCHE, Ghent, has a similar exhibit adjoining, his *dressoir* of the fifteenth century having a canopy. Three rooms erected against the wall on one side of the building claim special notice, viz. a dining-room, the cabinet of an antiquary, and a bed-room, all fitted up complete by various firms. A reproduction of an old Flemish fireplace, with the top portion in carved oak, is decorated with copper panels, sea-pieces in tiles and brass castings, while the inscription

Sunt tria damna domûs, imber, mala fœmina, fumus,

slightly transposed to equalise the spaces, runs round the cornice. The bed-room furniture is of oak in the Gothic style, with two chairs in Flemish Renaissance. The carved oak furniture in imitation of the antique by M. ROEGIERS, antiquary, Ghent, is very fine; M. EMILE LEBRUN, Ghent, also contributes the furniture of a dining-room. M. PELGRIM, Brussels, shows dining-room furniture, including telescope table with some small mouldings coloured a deep red, which produce a striking effect. M. F. ROSEL, Brussels, has also erected a drawing-room with reproductions of ancient furniture and decorations. Under the marble mantelpiece with ebony top there are brass dogs and hand-irons. The walls are covered with cloth painted in imitation of tapestry; and a cabinet has nickel hinges. Unless these, however, be taken to represent polished iron, they must be regarded as an anachronism. M. PH. J. TAELEMANS, Brussels, has sent two sideboards, one of which, in black wood with painted porcelain panels, affording a strong contrast, is effective; the other, already sold, forms part of the furniture of a dining-room, now being actually carried out with *cheminée* up to the ceiling and wainscotting, two mètres high. M. VAN HENDE, Ghent, contributes the furniture of two bedrooms, one Louis XV. and the other Louis XVI. The combined desk and cabinet of M. MATTHIAS ZENS, Ghent, in carved oak, is most imposing.

The third group is devoted to frames, and includes some excellent specimens of gilding produced by a chemical process. Group 4 comprises pottery, porcelain, and glass, with a special view to their decorative effect. *Facile princeps* in this department comes Madame VERMEREN-COCHÉ, Brussels, made Chevalière of the Order of LEOPOLD on account of her industrial success. A special pavilion contains some *chefs-d'œuvre* of ceramic art, the walls being decorated with reproductions on common earthenware of the works of ancient masters. VANDYKE'S *Christ on the Cross* is painted on a slab 32 by 20 inches, which was very difficult to burn on account of its size. RAPHAEL'S *Madonna della Sedia* is reproduced on a concave surface, with tone, colour, and design all good. TITIAN'S *Assumption of the Virgin* is also successfully copied. There are portraits on a gold ground to imitate those of the Gothic period, and fancy heads that might have been painted by TENIERS or REMBRANDT. A miniature of *La Cruche cassée*—not that of GREUZE, but with two figures—is most minutely executed. Three large round dishes were painted with allegorical subjects before being burnt; the consequence is

that they have a sketchy appearance. A dessert plate, painted by hand with an effective *grisaille*, is marked at the remarkably low price of 10 francs; but there is another, minutely decorated in the Renaissance style, with blue ground, and bearing the cipher of the establishment in the middle, valued at ten times that amount; while two round earthenware dishes, 25 inches in diameter, painted very successfully on enamel, one with roses and the other with grapes, are priced at 150 francs each. Everything exhibited is artistic and produced by hand, and new effects and combinations are continually being produced in the *ateliers*. This year the specialty consists in platinum and three different shades of gold; and another new effect is obtained by barbotine on porcelain, giving a relief to the ornaments, which is most effective. The painting on porcelain by three ladies happens to be arranged adjoining one another, illustrating three different styles. Madame NOËMI HEMARD, of Verviers, shows flowers and fruit, which, notwithstanding the practical difficulties with vitrifiable colours, are painted with absolute fidelity to nature; Mdlle. MARIE WODON, Brussels, evinces a style in which, however, nature is sometimes sacrificed; and Mdlle. MARIA GASPAROLI, of Ixelles, attempts realism, and even caricature.

The fifth group of decoration comprises painted and engraved glass. M. A. DE SAEGHER, Brussels, contributes two mirrors with bevelled edges, ornamented with polished brass in the Renaissance style, reproduced from ancient types. MM. STALINS and JANSSENS, Antwerp, send two windows in the same style, representing Poetry and Music, forming part of a series of five, of which the others will represent Painting, Architecture, and Sculpture. M. VAN CROMBRUGGHE DE KEUTRELAERE, Ghent, shows, amongst other ecclesiastical subjects, the fragment of a window intended for Everghem Church. The sixth group, wall-papers, including some in imitation of old leather, completes this large class.

In Section III. Metal Industry is subdivided into four groups, of which the first two represent jewellery and religious goldsmiths' work respectively. The third group—art bronzes—is chiefly represented by *repoussé* salvers and "suspensions" or pendent lustres for gas. Among the former, M. CHARLES ROSSIGNOL has sent eight brass plates showing the successive effects obtained by the chisel and hammer alone, without dies. A work of high art is his *jardinière* in the Pompeian style. M. A. ARENS, Antwerp, had a very fine show of small articles, including *repoussé* portraits in carved oak frames, *repoussé* plates representing the Kasteel van Laer and the Heerlykheid ten Esseche, both seigneurial edifices; old brass panels, mirrors in metal frames, and caskets in *repoussé* iron and cast brass. M. H. DE BUCK, Brussels, sends six lustres in brass *repoussé* work executed in the lathe. MM. LONGUEVAL ET CIE., Brussels, have on view lustres, "suspensions," clocks, a Renaissance *jardinière*, and two vases representing BELLEROPHON and TERPSICHORE. M. FELIX VAN DE VELDE, Brussels, exhibits some remarkably handsome Gothic lustres, fire-dogs, &c.; and M. J. SCHONJAUS, of the same city, lustres in various styles—Renaissance, Louis XVI., and Jewish, in which latter the gas-jet forms an angle of about 45 degrees with the vertical, throwing no shade; the brass is also variously tinted. M. GALANNEAU shows two plates of polished brass, both painted, one with a moonlight scene and the other with red flowers.

The principal exhibitor in the fourth group of this class—artistic wrought-iron work—is M. L. WUYTS, with his four anchors for buildings, American oak and fuchsia, all beaten out of iron. M. P. MESTDAGH, Antwerp, has mounted his weathercock, which serves as lightning-conductor at the same time. M. J. B. FONDU has reproductions of old Flemish fire-irons, a pavilion with nickelised locks of his invention, and a number of different locks capable of being opened at once by one master key, a new invention.

The limits that this notice has attained oblige us to dismiss Section IV., Textile Fabrics, with the observation that several firms show cretonne for hangings in subdued colours, but rendered rich by the introduction of a gold thread. In Section V., Miscellaneous, there are many capital specimens of printing, bookbinding, and illumination in imitation of the antique; and one firm sends playing-cards in the styles of all countries and of forty-seven different types.

Mention must not be omitted, however, of some ingenious sun-blinds shown by M. NICHOLAS BULENS, of Brussels, which may be pulled up and down by an endless cord without rack or weight, a spring on the end of the roller giving sufficient brake power to keep them in any position to which they may be adjusted.



The special competitions of this year are well contested ; and it is only in rare instances that the prizes are withheld. These are designs for a Renaissance mantelpiece for smoking-room ; a commemorative monument to the founder of a charitable institution, the cost not to exceed 200*l.* ; a single-lantern lamp-post for the streets of an important town ; a bookcase for an archæologist's office ; a modern cabinet decorated with mirrors ; a *glace sans tain* for landing window ; a pulpit for church of fourteenth century ; a gas girandole for church of thirteenth century ; a drawing-room carpet in seven colours ; and a centre piece in form of basket, not to exceed 48*l.* in cost. The second series of executed objects, are :—The furniture and decoration of the office of a large industrial establishment, with desk, chair, *casier*, and bookcase on castors ; a *jardinière*, 24*l.*, for a landing ; a Renaissance dining-room table in oak, not to exceed 28*l.* ; four chairs of the value of 10, 20, 40, and 75 fr. respectively ; porcelain table-service ; table-cloth and dozen napkins ; church lamp ; art binding to a quarto book ; an octavo binding for 4*s.* ; and a sledge.

This interesting collection has been got together mainly through the exertions of the President of the *Chambre Syndicale*, M. C. VERHAEGHE DE NAEYER, and its indefatigable secretary, M. EMILE VARENBERGH ; while M. O. VERSAVEL is the commissioner specially delegated to superintend the installations. All may be sincerely congratulated on the result achieved.

### FRANCOIS BOUCHER.—II.

(Concluded from page 139.)

BOUCHER was the first French artist whose sketches were purchased and eagerly sought for by the public. WATTEAU, LANCRET, and OUDRY, &c., made the sketches of their paintings on the back of a copy-book or any other smooth surface which was nearest to their hands. These were sometimes nailed against the walls of their studio, and unless preserved as a souvenir by some friend, or sold at their death among their books and furniture, they were inevitably lost to posterity. To BOUCHER it first occurred to sell his original drawings, which were eagerly secured by amateurs to adorn panels in the boudoir of a court beauty, or bought by collectors such as JOULLAIN and BASAN, who gave enormous prices for them, because of their intrinsic value. BOUCHER composed a sketch with as much ease as though he had entered the world pencil in hand. He usually drew with chalk, touched here and there with *sanguine*, on grey or yellow paper. He produced designs of mythological subjects which have been mistaken by connoisseurs for CARACCI's. With a few strokes of his pencil we have a marquise, her brocade train broken into a thousand folds, her point-lace collar simply indicated by a few touches ; the sketch, however, is executed with a skill which brings the figure clearly before us. But few water-coloured drawings exist of BOUCHER's. M. DE GONCOURT possesses one of these *rare aves*, of which the subject is a shepherdess seated beneath a tree, and placing a rose a shepherd has just gathered in her hat ; a goat and sheep are in the foreground. M. DE GONCOURT owns also fourteen of BOUCHER's drawings on grey and on yellow paper—one of these done in pen and ink, touched with bistre, on a ground slightly rubbed in with red chalk. All are signed, and on the back of some among them is written the various sales at which they have been purchased. For example, there is one on yellow paper, drawn in the three chalks, of which the subject is a young woman in a Spanish costume holding a fan, signed BOUCHER, 1750 ; and there is further inscribed on it, "This drawing formed part of the NIEL collection, and was sold in 1781 at the SIREUL auction for 123fr. to M. DULAC." Another drawing has for its subject a young girl clad in a chemise ; she stands at the edge of a river, preparing to bathe, her arm resting on the shoulder of her companion, around are Amorini sporting with a swan. This has been etched by HUGUIER as *Vénus au bain*, for a frontispiece to the third volume of "Sujets et Pastorales, par F. BOUCHER, peintre du Roy." A *facsimile* of it is also reproduced by DEMARTEAU, No. 345.

Models were unknown to fame in the eighteenth century. Old DOYEN writes in considerable anxiety as regards his son's morality in view of his studying these dangerous personages, but of their names we have no record. COCHIN's amusing engraving of *Students at the Academy* gives us the model of the day in a skirt *falbalassée*, beneath which a high-heeled shoe is visible : her head is surmounted by a crown ; she is

sitting for a *tête d'expression*. There was one, however, whose name has descended to posterity in the scandalous annals of the day, to whom we have already alluded. The anecdote regarding her is of the period which explains its crudeness. MURPHY was sister of the Academy model, at whose death she succeeded to the place. Madame DE POMPADOUR, wishing to attract the King's attention to this fresh young beauty, had her painted in a Holy Family for Queen MARIA LECZINSKA's oratory, where the King daily heard mass. The scheme was crowned with success. BOUCHER's model had the honour of inaugurating the *Parc aux Cerfs*. She was the last model BOUCHER employed. Sir JOSHUA relates that when he visited BOUCHER in Paris he found him painting without a model, at which REYNOLDS expressed surprise ; BOUCHER told him that he had not for many years employed one.

It is but a few years ago that an old house close to the Sorbonne existed which had belonged to the engraver DEMARTEAU. The exquisite painting which decorated it proved BOUCHER's gratitude to him for the skill with which he reproduced his drawings and paintings. BOUCHER had painted the walls of the drawing-room, and a prince would have envied the possessor. A trellis-work covered all the space save that contained in four panels, filled by delicious scenes of country life ; over the doors Amorini, playing with the water of a fountain and eating fruits, were executed *en camaïeu* and surmounted by doves ; the whole effect of the decoration being that of a lovely country in the midst of summer.

BOUCHER's industry was amazing. He had more orders than he could execute, yet he found time for painting fans and even the panels of carriages. Madame DE POMPADOUR, who was not only his patron but his friend, consulted him as to the decoration of the various palaces she induced the King to erect for her accommodation. Her Chateau de Crécy was adorned by his paintings. The chapel of her chateau at Bellevue was the production of his genius. She it was who ordered the allegorical subjects *Eloquence* and *Astronomy* for the Medal Room at the Bibliothèque Royale, where these fine works still exist. They were exhibited with two others, *History* and *Science*, subsequently painted as pendants, at the Arts Décoratifs in 1880. The *Forges de Vulcain* was ordered by Madame DE POMPADOUR for the royal bedroom at Marly ; she likewise purchased his two largest and finest works, *Sunrise* and *Sunset*, which she presented to LOUIS XV. Madame DE POMPADOUR commissioned BOUCHER to paint her portrait in full dress. LA TOUR has painted her in pastels, which portrait is in the pastel-room at the Louvre. BOUCHER's portrait—the finest he ever executed—was exhibited at the Alsace-Lorraine Gallery in 1872, and will be fresh in the recollection of many. The Marquise, in a robe of turquoise blue, silver lace, and roses, supported by a cushion of nankeen silk, is seated in a library ; a portfolio of drawings and engravers' tools are beside her ; a roll of music, a King Charles spaniel, and some half-blown roses are at her feet ; a writing-table and book-shelves, reflected in a mirror, are in the background. Madame DE POMPADOUR, to whose initiative France owes the Sèvres manufactory of porcelain, was not only an art patron, but was herself no mean artist. Gems engraved by her are preserved in the jewel-room of the Bibliothèque, and the style Louis XV. was mainly the creation of her taste. It was due to her influence that BOUCHER was selected to direct the manufactory of tapestry at Beauvais founded by COLBERT, but which had fallen into disrepute in consequence of its neglected condition, and in June 1755 BOUCHER was appointed to supersede OUDRY in the direction of the Gobelins manufactory, for which the Marquis DE MARIGNY, Surintendant des Beaux Arts, received the thanks of the artists employed at the Gobelins on account of BOUCHER's extreme popularity. Madame DE POMPADOUR's influence survived even her death. On September 8, 1763, BOUCHER received the King's commission, in virtue of which he was appointed to succeed CARL VAN LOO, demised a few days previously, as Premier Peintre du Roy. The document is signed by the King. Two years later the Academy of St. Petersburg elected him Associate, and the Academy of France appointed him Director. FRANÇOIS BOUCHER was somewhat old for this latter position, and the spoilt favourite of fortune neglected the duties of the office. Fortunately for the students, COCHIN, to whom VAN LOO had left the direction of the classes, did most of the work for BOUCHER. Meanwhile the finances fell into confusion, the Academy models complained that their salary (24*l.* a year) was not paid, neither were the poorer students, who depended on the charity of MICHAEL VAN LOO



for their dinner. The result of this careless superintendence was that once more the annual Salon was on the point of being closed from lack of funds. DIDEROT, not unwilling probably to cast a stone at BOUCHER, gives a pitiable account of the state of things in "Salons d'Exposition," republished by BELIN, Paris, 1818. BOUCHER was making 2,000*l.* sterling by his paintings, and, secure of Court favour, cared not what the Encyclopædists wrote. In 1766 BOUCHER accompanied M. DE BUSSET on a visit to Holland for the purpose of studying RUBENS in his own country, but with this exception he never absented himself from his studio, in which was a perfect museum he collected of precious stones, such as malachites, jaspers, agates, amethysts, crystals, as likewise of rare shells, coloured marbles, and foreign woods, for the purpose of studying the effects of colour in the productions of Nature. After his death this collection, valued at four hundred pounds, sold at a higher price. LUNDBERG's pastel of BOUCHER, now in the pastel-room of the Louvre, gives an admirable idea of the prosperous artist in his *atelier*—a pleasant smile on his countenance and a penetrating expression in his eye. ROSLIN painted him for the Academy in his court dress of dark-coloured velvet with lace chitterlings and ruffles. The engraving of this portrait by SALVATOR CARMONA conveys a charming impression of the old artist. An anecdote of the time testifies to the kindly nature of the man. VIEN had been twice refused admittance to the Academy. The second refusal broke his heart. BOUCHER went to see his rejected picture, and at once told him he would never again cross the threshold of the Academy if he were not at once received. In 1767 PIGALLE (the sculptor) and LEMOINE intrigued to prevent MILON, an able artist, from obtaining the prize due to his merit. On the day of the distribution of prizes the students, ranged in double file outside the Academy, turned their backs to the Academicians as they came out, after this decision; but when BOUCHER appeared they cheered, and even attempted to carry him in triumph round the square. BOUCHER had but one son, who became an architect, but who did not inherit his father's genius. His eldest daughter married DESHAYES, an artist of singular talent, who died at thirty, to the grief of his father-in-law. Madame DESHAYES survived her husband only a few months. BOUCHER's second daughter married BANDOIN, whose *gouaches* rival those of FRAGONARD and almost equal BONINGTON. BOUCHER also lost this son-in-law, of whose talent he was naturally extremely proud: BANDOIN died 1769. The old man was attacked by asthma, but painted to the last hour of his life; an unfinished picture, intended as a gift to his physician, was on his easel the day of his death, May 30, 1770. He was buried at his parish church of St. Germain l'Auxerrois; the register of his death is signed by his son, VIEN, VANLOO fils, and PIERRE the artist, &c. The complete catalogue of the thousand pictures he painted is published in M. DE GONCOURT's "Art au XVIII. Siècle," to which we are indebted for much of our information.

#### ARCHITECTURE IN AMERICA.\*

THE needs of no one time exactly resemble the needs of another, and it would be absurd to expect the late nineteenth century to find itself completely at home in the houses of the eighteenth, or even in those of its own earlier years. This, that we are living in, is a time of universal self-indulgence and love of ostentatious display; and how could such a generation content itself in the houses of its poor and ascetic ancestors?

But, while one generation differs from another in this, that, or the other superficial characteristic, all generations are alike in substantial, and it is in substantial that we can learn from the architecture of our forefathers. It was in a sense of proportion, of picturesqueness, and of comfort, that the old builders excelled; and it is in a sense of proportion, of picturesqueness, and of comfort, that our builders and architects are particularly wanting. There is, however, one important fact to be remembered. What we now are obliged to ask others to do for us, our forefathers used to do for themselves. We have no mention of the arrival of the first architect on these shores, but he was at least one thing that did not come over in the May-flower. Better-informed persons than I am will know whether the old buildings of colonial and revolutionary times were designed by professional architects, or were the work of mere builders; but I believe there can be no doubt that the handsome houses in Gloucester, Portsmouth, Hingham, Cambridge, and other Massachusetts towns—the houses that made old

New York so dignified a city, and those that still give to little Newport an air of consequence; or those, again, to which some of the New Jersey towns and cities owe their ancient aspect, that makes the frequent discoveries of mastodons and other fossils in the soil seem quite in keeping—there can, I believe, be no doubt that all these houses were the work of simple "builders," who knew their trade and ever cared to give themselves a finer name. And what is true of these houses and churches is also necessarily true of the cottages and small houses; for if architects had been needed to build the better sort of structures, the lesser sort would never have been so good as they are. The general excellence that marks the dwellings of any people is a proof of the non-existence of professional architects among that people. Where architects abound, the art of building always deteriorates. Did architects design the houses of Venice? Architects may have designed the bad ones, but never the good ones. As soon as architects got themselves fairly established in Venice, her shabby days began. But, to take more humble examples, consider the cottages of England, the chalets of Switzerland: is it not evident that they are the spontaneous outgrowth of a general good taste that stood in no need of "assisting." And even in England, where the profession of architecture, owing to the great patronage of the noble and wealthy classes and of the Government, has reached a high condition of skill and technical taste, everybody must have remarked the incongruity between its productions at the best and those of the older people, created before there were any architects other than clerical and monastic amateurs.

Every old church in England looks built by the same hands that built the old houses that nestle about it; or, rather, church and houses look as if they had not been built all, but had grown, and grown out of one root. Let the best architect in England try to replace one of these old churches that may chance to have been destroyed, and, no matter how familiar he may be with the architecture of the period to which the old church belonged, the new one will look like an interloper.

It is to architects that we owe all the ugly building that offends us in our large cities and in our country towns and fashionable summer quarters. And I will grant that it is to architects that we owe, nowadays, the few—the very few—buildings on which our eyes can look with any pleasure. The work of the professional builders is always in these days an eyesore, but the builders simply follow the patterns set before them by the architects. A builder must call himself an architect before he can be employed in any important work to-day. The man—I forget his name—who built Mr. A. T. Stewart's house and iron shop, and many a structure beside, was called an architect. Architects, too, are responsible for the churches on the Back Bay lands of Boston. An architect built the one with the foolish frieze of sculpture encircling the lofty, awkward tower, and wholly unintelligible from below! Costly sculpture—ugly and unintelligible, it is true, but costly for all that, and by Bartholdi, a man whose works seem by some fatality to have been unloaded upon this bedeviled land, as if we had not sculptors enough of our own, quite capable of work as bad! And this sculpture is put, as I say, at the top of a lofty tower, where no human eye, unless armed with spy-glasses, can make it out—a proceeding not easily reconciled with one's notions of Boston, where, if anywhere in the country, the laws of æsthetics and the limitations of the art are supposed to be understood at least, if not spiritually discerned. And another architect built the church in that Back Bay quarter, dedicated, we suppose, to some female saint, since it has for emblem on the top the completest Saratoga trunk—to what end, unless an emblem, no mortal could ever tell me, nor I by my unaided wits discover. An architect also built the Art Museum, so finikin fine, with its heads of great men looking out of port-holes in the most shipwrecked fashion; a senseless treatment, although borrowed from that overdone Pavian Certosa, where so much is to be seen treated in an extravagant, ostentatious manner. This particular extravagance—medals run mad, as it were—seems to have taken hold of the fancy of certain of our architects; we find it repeated again in the Sanders Theatre at Cambridge, and in the Historical Society's building in Brooklyn, where that good sculptor, Mr. Olin L. Warner, has been called on to design the heads of the shipwrecked personages. If I cannot like the outside of the Boston Museum, it is the outside alone that vexes me. Wholly pleasant are the contents, and the management every way creditable to Boston; a Museum of Art, with actually the collection of art material its chief object, and a generous courtesy presiding over its management. But Boston has been as unfortunate in her architects as New York, though in quite another and, it may be thought, in a more creditable way. The Museum of Fine Arts and the Memorial Hall at Cambridge, for instance, are examples of what comes of building getting into the hands of literary, critical men, art students, with their heads crammed full of remembered bits of Old World architecture, and their portfolios stuffed with photographs of more and more bits. Even "Trinity," the most effective piece of building yet done in America—and Mr. Richardson is one of the few men, alas! how dolefully few, who have the stuff of a real architect in them—even Trinity owes two-thirds of its external impressiveness to its tower, borrowed almost literally from the tower of the Salamanca Cathedral. Borrowing, borrowing everywhere; an original motive almost

\* From an essay by Mr. Clarence Cook in the *North American Review*.



impossible to find. For the people at large have no ideas on the subject; the "builders" have been snubbed into taking a back seat and keeping it; and in architecture, as in all our fine arts, notably in the art of painting, the field has fallen into the possession of a set of clever, accomplished, but overcultivated young men who have come back from French and English studios, offices, and pedestrian trips, with a plenty of "material" in their sketch-books, much of it good in its own time and place, but, when worked up into houses for the average American, as alien to his mode of life, to his needs, and to his character, as can be conceived. Much fun has been made—and certainly too much fun could not be made—of the fact that the doors of Mr. Wm. H. Vanderbilt's house on Fifth Avenue are reduced copies of the gates made by Ghiberti for the Baptistery of Florence. The original gates, owing to the rooted defect of their design, to their multiplication of planes and of small parts, do not submit happily to reduction; and these Vanderbilt copies have a mean appearance, and are far from doing justice to the price that was paid for them. But, were they copies as perfect as could be made, the absurdity of their being where they are at all, would be no less; yet to this absurdity the architect of the house willingly lent himself, and art-writers, supposed to have reflected on the laws that govern art, have given their warm approval, in print, to this most tasteless proceeding.

In fact, the art of architecture has not received many worse blows in this country than have been given her by the three Vanderbilt houses recently erected in Fifth Avenue—two of them by architects of high reputation. Three such opportunities will not, it is likely, occur again for many years, and they have found our architects entirely unprepared for them. Mr. William H. Vanderbilt's house is the worst of the three, and though there is a story afloat that it is carried out in its present material contrary to the earnest wish of the architect, who had intended a light-coloured stone to be used, it is not easy to see how that could have made it look less like a gigantic knee-hole table than it does at present. What an incongruity between the coarsely-executed, ill-designed band of foliage that belts the entire building—one slab the exact repetition of another, and all having the appearance of being stamped with a waffle-iron! What an incongruity between this machine-work and the borders of the famous gates of Ghiberti, with their charmingly varied designs of leaf, and fruit, and flower, and bird! Where is the profit, I must ask, in being a millionaire if all one's money cannot command better design than this? And how discreditable to the profession of architecture in this country is the fact that a man with Mr. Vanderbilt's enormous fortune, and willingness to spend it, can find no better service than has been at his disposal in building this clumsy block!

It may be said that Mr. Herter is not an architect, properly speaking, but a cabinet-maker. Nevertheless, he is, I believe, a regularly-trained architect, and he is certainly a man of varied accomplishments. But, whatever may be thought of Mr. Herter, no one will deny that Mr. Richard Hunt is an architect; and, as an architect, he has certainly loaded earth with some of the most ungainly among all the ungainly structures that make our streets such a misery for any one who cares for good building. He spoiled quiet Beacon Street in Boston, enjoying her dowager respectable slumber in the shade of the Common elms, by the erection of the ugliest house that I believe has ever been built this side the Atlantic. He built the Lenox Library, with its silly pediments and blank monotony of wall—a very fit tomb, however, for the mummied treasures that are hermetically sealed within. Here again we see a very rich man powerless, with all his money, to get, artistically speaking, his money's worth. And now comes the Vanderbilt house, on which another fortune has been lavished, and what is the result? Nothing but a copy, and a slavish one, of the architecture of the time of Francis I., with its entrance an adaptation of a French Renaissance chimney-piece! There does not appear to be in all this pretentious, fussy building a single new motive; it has to the student the air of being nothing but a patch-work made up of bits whose original could easily be identified with a little search. Now, we laugh at the architect who, a few years since, was persuading us all to accept his designs for civil edifices and for private houses in the Norman style, the Perpendicular style, and the style of the Pantheon. But, on what grounds is it any more respectable to persuade a rich man to accept a design which is only a hash of French Renaissance detail, than to persuade a corporation into putting up a university building in the style of English Perpendicular Gothic, or another to erect a prison in a parody of Egyptian architecture? But all such doings make us regret the days when we had builders whose common-sense and correct eye could have saved us from being made ridiculous.

If I wished to make a complete survey of our blunders in architecture, I should need, not ten nor a hundred pages, but an entire number of this "Review," for they meet us at every turn. From the gigantic folly at Albany—a problem with which men of original talent like Messrs. Richardson and Eidlitz have struggled in vain, and lost far more than they have gained in the hopeless task of bringing order out of chaos—from this discreditable undertaking, to the various examples of Mr. Mullett's conceit and

ignorance, that make the Government a laughing-stock whenever it puts up a new post-office in any of our cities, or a new official building in Washington, there is really, to the most hopeful eye, very little outlook that is encouraging. Some relief had been hoped for with the advent of the group of young architects who were so cordially welcomed, and who have been rejoicing like little wanton boys that swim on bladders, these half-dozen summers, on a sea of glory. Of their cleverness there can be no doubt, nor that they have given many of our rich men prettier toys to play with than they could have been supplied with at any former shop. But, after all, we are beginning to find that the feast they invite us to is a feast of scraps, and that the strife seems to be with them, as with our women in the furnishing of their houses, who can invent the most startling novelty. After examining many of these fashionable houses, the impression is inevitable that what should be the true aim of the architect, the comfort of the occupants expressed with elegance, has been left entirely out of sight, and that the exhibition of the architect's ingenious fancy in the invention of "dodges," to be executed without the least regard to fitness or cost, has taken the place of the serious intellectual motives that ruled an older time. And the worst is that these offences are perpetrated in the name of a style that was remarkable for simplicity and propriety in its ornamentation, and for the comfortable dignity of its plans and general design. It seems impossible for these young architects to do anything quietly. They will not, if they can help it, let the eye rest for a moment anywhere. . . . The architects will, no doubt, have reason on their side if they throw a portion of the blame on the public. The public, they will say, insist on novelty, and encourage us, when we give them a little, to give them more. Great public buildings like the Produce Exchange are undertaken in a purely mercenary spirit, without a thought given to the intellectual credit of the corporation or to the elevation of the public taste. A carefully thought-out design, like that, for instance, sent in for our Produce Exchange by Mr. Withers, had no chance whatever—the drawings not even taken out of their portfolio, simply because the staircases were put in the only place fit for the staircases of such a large building, namely, at the angles. And a design that met with great favour was one in which the water-closets of the whole upper buildings were discharged through one of the iron columns that support the great main hall intended to accommodate the whole membership of the society!

### THE GRANBOROUGH CHRISMATORY.

THE last number of the Proceedings of the Society of Antiquaries contains the following description by the secretary, Mr. C. Knight Watson, of the Chrismatory which was lately discovered in the wall of Granborough Church, Bucks:—

This Chrismatory (which derives its name from one of the three oils it contained, the Sanctum Chrisma, the other two being the Oleum Infirorum and the Oleum Catechumenorum), may be described as a pewter box,  $6\frac{1}{4}$  inches in length,  $2\frac{1}{2}$  inches broad, and  $2\frac{1}{4}$  inches high, raised three-quarters of an inch from the ground by legs at the four corners, which appear to have been in the shape of four lions sitting. The remains of a hinge, with its pin at the back of the upper surface, points to the existence of a lid, of which, in fact, two fragments remain, in one of which is the small tube which adjusts itself readily to the pin of the hinge. The other and larger fragment has at the summit a pierced and engrailed ridge which (for reasons presently to be mentioned) seems to indicate that the lid was not flat but high-pitched. On lifting the lid we find three circular perforations,  $1\frac{1}{2}$  inch in diameter, made to receive three cylindrical pots with a flanged neck, nearly 2 inches deep, very much after the fashion of the ink-pot of a modern inkstand. Each pot has had its lid, of which two still remain, and each of the remaining lids has at one time had its button or knob, wherewith to raise or detach it. On so raising these two lids we find fastened to their under surface a metal prong  $1\frac{1}{4}$  inch in length; one of these still retains the hook at the end which was probably used to lift up the tow or cotton-wool from the bottom of the pot containing the oil, and so to moisten either the thumb of the priest or the persons of the sick, &c. Fragments of some fibrous material remain at the bottom of the pots. The presence of this material seems to be best explained by the words of the *Rituale Romanum*—"ut effusionis periculum caveatur, modum erit in his vasculis bombacium seu quid simile habere, Oleo sacro, et Chrismate separatim perfusum, in quo pollex, cum opus est, ad inungendum immittatur." The necessity of keeping the three oils in distinct compartments is insisted on by Archbishop Ælfric in his epistle entitled "Quando dividis Chrisma," printed in Thorpe's "Ancient Laws," &c., fol. p. 464, where we read—"Ye ought to have three flasks ready for the three oils, for we dare not put them together in one oil vessel, because each of them is hallowed apart for a particular service." In the Society's Proceedings for March 23, 1871 (vol. v., p. 117) attention was called to a representation of one of these tripartite Chrismatories in Strutt's "Heorda," vol. ii., pl. 57, where a box, very similar in its arrangements to the Granborough example, is seen in the hands of a server when the bishop is ministering extreme unction to



Richard Beauchamp, Earl of Warwick. Reference was also there made to an example of such a box which had been found at St. Martin's Church, Canterbury. This box is thus described in Dr. Dunkin's "Report of the Proceedings of the British Archaeological Association at Canterbury," 4to., 1844:—"An inkstand of the fourteenth century was found on the wallplate of the nave when the roof was removed." Having learned from Mr. Bloxom that this object when he saw it was in the possession of the Rev. W. J. Chesshyre, the then Incumbent of St. Martin's, I wrote to my friend, Canon Robertson of Canterbury, who informed me that it was now in the possession of Mrs. Chesshyre, and through the kindness of that lady this second example has been set up for exhibition, and is on the table to-night. It is a brass box 6 inches long, 3 inches broad, and 2 inches high. The lid is high-pitched with slanting gable ends, nearly equilateral, and surmounted by a vertical crest or ridge pierced with quatrefoils. The extreme height of the lid is  $2\frac{3}{8}$  inches. That of the vertical crest or ridge is  $\frac{7}{8}$  inch. The lid is attached behind by two hinges, each  $\frac{1}{2}$  inch broad, and of which the raised plates are riveted to the back and lid of the box. The lid is fastened, not locked, by a hasp, attached by a plate to the lid, and dropping on to a movable catch on the face of the box. The upper and lower edges of the box, and the ridge, are mounted with mouldings attached by rivets. On opening the lid the same arrangements are exposed to view as in the Granborough example; but they are in a still less perfect condition. The three oil-pots are all of them in fragments, and to none of them are the lids now remaining. At the bottom of the pots, however, we find similar traces of some fibrous material. The pots, unlike the box itself, are of pewter. In the "Handbook of English Ecclesiology," published by the Ecclesiological—late Camden—Society, 12mo., 1847, examples are given of Christmatories which are attached to and in fact are cut out of the same stone as the font. One of the most remarkable of these is at Youlgreave, in Derbyshire. Instances are also quoted of niches, in the immediate vicinity of the font, in walls or piers. I would submit that these niches may have been intended for the reception of metal boxes, such as those exhibited this evening. The subject is one of some interest, and it is hoped that the exhibition of these two examples may call the attention of those who have hitherto supposed they were the possessors of a mediæval inkstand.

### RESTORATION OF SEAFORD CHURCH.

A PUBLIC meeting was held in Seaford last week to consider the project for restoring the tower of the church. Plans were exhibited which had been prepared by Messrs. John S. Lee & Son, architects, and were accompanied by the following report to the vicar and churchwardens:—

Gentlemen,—Herewith we beg to hand you drawings and specifications of the proposed repairs and restorations, and we beg also to submit a few remarks to explain the principles which have guided us in dealing with this interesting church.

The ancient part of the fabric is very interesting, not only in its architectural, but in its archaeological and historical features. It has been our object to preserve intact as far as possible all the existing ancient features, and in all cases where it is necessary to make repairs for the purpose of arresting further decay. We have limited the repairs as far as is possible consistently with the preservation of the fabric, and in every case we have preserved one at least of the old members of the parts repaired to preserve the evidence of what the original was. In parts where the original has entirely disappeared we have referred to all the available evidence, books, and prints, and have endeavoured to reproduce what we believe to have been the original features.

The mediæval part of the church appears to have been built chiefly at three separate periods. The first, or most ancient, was built at the latter part of the eleventh century; it forms the exterior faces of the lower stages of the north and south sides of the tower, and consists of one arch on the north side, a similar arch on the south side. These archways are semicircular; the capitals are of the customary early Norman type, known as cushion caps. Above the archways, and of the same period, are small semicircular headed windows, which evidently formed the original clerestory windows; under these windows there still exists the original housing course of the first aisle roof, showing that there were aisles and not transepts north and south of the tower. We mention this fact as to there having been aisles and not transepts, as it appears to disprove a statement, which has been generally accepted, that this was originally a cross church.

The second part (in point of age) was built in the twelfth century, probably within seventy years of the first part. The first or eleventh century church, as originally designed, was perhaps never completed, or, if completed, it was soon destroyed. The second part was designed for a fabric upon a much larger scale. The parts of this (the thirteenth-century period) are two bays of the arcades, north and south of the nave, the windows of the clerestory of the nave, and in a line with them similar windows on the north and south sides of the tower (only a fragment of the one on the north side now remains). Under these latter windows there

remain some of the corbel-stones which supported the roof of the second aisle. Some of the corbels of the eaves of the nave roof are also of this period, and it is probable that the fragments of an arch, now to be seen over the western doorway, are remains of the doorway probably built at the same time.

The third part in order of antiquity was built probably in the latter part of the fifteenth century, and consists practically of the fabric of the tower, and was built inside of the walls of the nave of the original Norman church. The lower stages of the tower have, in fact, the outside walls of eleventh and twelfth century work, and the inside walls of fifteenth-century work; the upper stages are entirely of fifteenth-century work.

The window on the north side of the tower in the stage next above the vestry-roof is an insertion of a fifteenth-century window in the earlier clerestory window of the twelfth century. A few of the jamb stones of the earlier window are still to be seen outside of the jambs of the later insertion.

We have no difficulty in deciding upon what are the original features and design of the church tower, except in that portion of the lower part of the west side of it which has been faced with brick and flint in the present century. The modern brick and flint works are without any pretensions to architectural design; they have completely concealed, if they have not destroyed, the original mediæval work. The fifteenth-century doorway, however, still exists, and this, although it is meagre and of poor detail, we have retained on account of the light it throws upon the condition of the fabric in the fifteenth century. The original window over the western door has been removed, and a wooden window of the most wretched character has been substituted. We have no doubt that the modern wooden window is an unskilful copy of the original window, which was of stone, in three lights, of fifteenth-century work of the same character as the other fifteenth-century windows of the belfry stage. We have no conclusive evidence whether there were or were not buttresses on the west side of the tower, but we hope to find some evidence when the modern brick and flint come to be removed. We conjecture that in the rear of the modern brick and flint work will be found portions of the original Norman west end of the church, and that if any buttresses ever did exist they would be of the flat or slightly projecting type used by the builders of that period. We look to discover, during the execution of the works, what was the original design, and to make such modifications in our drawings as may be necessary to bring them to conformity with the original.

The ceiling of the first stage of the tower inside has probably been formed, or intended to be formed, by a stone vault. We are induced to form this opinion by the fact that the first course of stone of such a vault still remains both in the north and south sides. The present ceiling is a common modern wooden floor, and has joists fixed at a level below the points of the adjoining archways; this also tends to confirm our conjecture that the ceiling was a vault nearly concentric with and above the archway of the western window.

In accordance with your instructions we have made approximate estimates of the probable cost of the works in several sections as follows:—

Section No. 1.—The repair and restoration of the two upper stages of the tower, including the parapet and the roof, will cost about 200*l*.

Section No. 2.—The restoration of the western window will cost about 27*l*.

Section No. 3.—The restoration of western doorway, including a new oak door and new ironmongery, will cost about 37*l*.

Section No. 4.—The removal of the modern brick and flint facing of the lower stage of the tower on the western and southern sides, and the substitution of new stone and flint work to match the best of the old, will cost about 110*l*.

Section No. 5.—The repairs of the tiling of the roofs of the church generally, the substitution of new boarded ceilings to the church for the present lath and plaster ceilings, the provision of a new screen and swing doors in the inner face of the western doorway, the provision of a new vaulted ceiling to the first stage of the tower, the removal of the stove from the tower to the north aisle, the removal of the font from the tower to the western end of the south aisle, and the consequent alterations in the pews, will cost about 200*l*.

Section No. 6.—The provision of new steps in the western doorway, and of new boundary walls and gateways at the western side of the churchyard, will cost about 264*l*.

Section No. 7.—The formation of an open channel and dry area around the outside of the church generally will cost about 40*l*. Total, 878*l*.

We beg to suggest for your consideration whether the space of ground which will be available at the west end of the tower when the modern brick and flint works are removed should be thrown out into the public road. The road would certainly be improved; the appearance of the tower would also be improved, as no part of its elevation would then be hidden; and there would be a saving in expense, as a less length of boundary wall would have to be built.

A committee was formed to obtain subscriptions in order to carry out the work.



## NOTES AND COMMENTS.

At the last meeting of the Académie des Beaux-Arts those clauses of the will of the late M. LEHMANN that concern the Academy came up for consideration. In this rather eccentric document the late Chief Professor of the Ecole des Beaux-Arts enumerates various valuable works of art and furniture which are to be sold by public auction, and half the proceeds handed over to the Academy. If this moiety amounts to but does not exceed 25,000 fr., it is to be invested in State funds, and the dividends applied to the foundation of a triennial prize of 3,600 fr., "to be awarded to the young painter, aged at most twenty-five, who, during the three preceding years has executed the work which, in the choice of subject, composition, style, and execution, protests the most eloquently against that debasement of art which appears to be encouraged by the doctrines most in favour at the present day." Such are the exact terms of the will, and they contain a striking condemnation of the theories and tendency of the modern realistic school of painting, against which the testator throughout his lifetime waged ceaseless warfare. The official denomination of the prize is to be the "Prix Lehmann, for the Encouragement of good Classical Studies"; and according as the sum realised exceeds or falls short of 25,000 fr. the prize is to be made biennial, or the capital allowed to accumulate until the required sum of 25,000 fr. is realised. The Academy will to-day decide upon the acceptance or refusal of this curious legacy.

THE director of the Paris art publication *L'Art* has presented to the Louvre a portrait by ALLAN RAMSAY of Queen CHARLOTTE, the wife of GEORGE III. The Louvre does not possess many pictures by English artists, but there is now a desire to obtain them, and the portrait by the Scottish master will be a valuable acquisition. *L'Art* has also given to the Louvre six drawings by some unknown miniaturist of the French school.

THE invitation of the Glasgow Institute of Architects to competitors for the proposed Municipal Buildings ought to have been accepted more generally. As only forty-nine architects have responded, the designs which are on view in the Corporation Galleries do not represent one-half the labour which has been expended on the competition. It has been ascertained that eighteen of the Glasgow competitors have sent their designs, together with twelve from London, four from Edinburgh, and three from Manchester. The exhibition will remain open during the week.

THE geological character of the stones forming the Stonehenge group has been determined by Professor PRESTWICH, the geologist. In addressing a small party of members of the British Association he said that the stones consisted of two sorts—large blocks of sandstone, and smaller blocks of slates and rocks of igneous origin. It was formerly supposed that those great masses of sandstone had been brought from Bagshot Heath, where were found masses of stone of similar composition. But that was not the case. There would have been enormous difficulties in carrying stones such a distance. The plain consisted of chalk. The outer layers were of the lower tertiary beds. The country had been denuded of the softer masses of clay and sand, the larger masses being strewed over the surface. The extreme scarcity of stone in that district had led to the use of large sandstones for farm purposes. About one mile from Stonehenge were found still *in situ* blocks of stone similar in character. In the neighbourhood of Marlborough they were found in greater quantities. Now, he believed that when the Britons first inhabited that country the plains were scattered over here and there with blocks of sandstone, and thus there was no great distance to convey them to Stonehenge. With regard to the smaller blocks they must have come from a great distance—in the opinion of some persons, from the Welsh mountains. But Professor PRESTWICH was of opinion they represented some of the rocks of Brittany. It was not impossible that the same tribes which erected the great monuments and other monuments of Brittany might have come to this country and brought with them the smaller blocks which formed the inner circle, and left the larger ones to be supplied from the native rocks. The Professor declined to say anything about the use of Stonehenge.

HALLAM expresses surprise at the extent of the knowledge attributed to DA VINCI, and which would seem to be in advance of his generation. But the evidence of the artist's skill in the sciences hitherto had to be taken on trust. With the exception of the "Treatise on Painting," and of which a sort of translation into English exists, few of his manuscripts have been printed. They are found in public and private libraries, and if they had been written by Egyptians less could hardly be known of their contents. But this obscurity is not likely to endure for long. An attempt has been made in France to employ one of the photographic processes to reproduce some of the manuscripts belonging to the Institute, and the success is so great as to excite other Governments to follow the example of the French. DA VINCI wrote from right to left on his pages, but in order to facilitate enquiry the matter has been printed in the ordinary way at the foot of each page, and a translation is given.

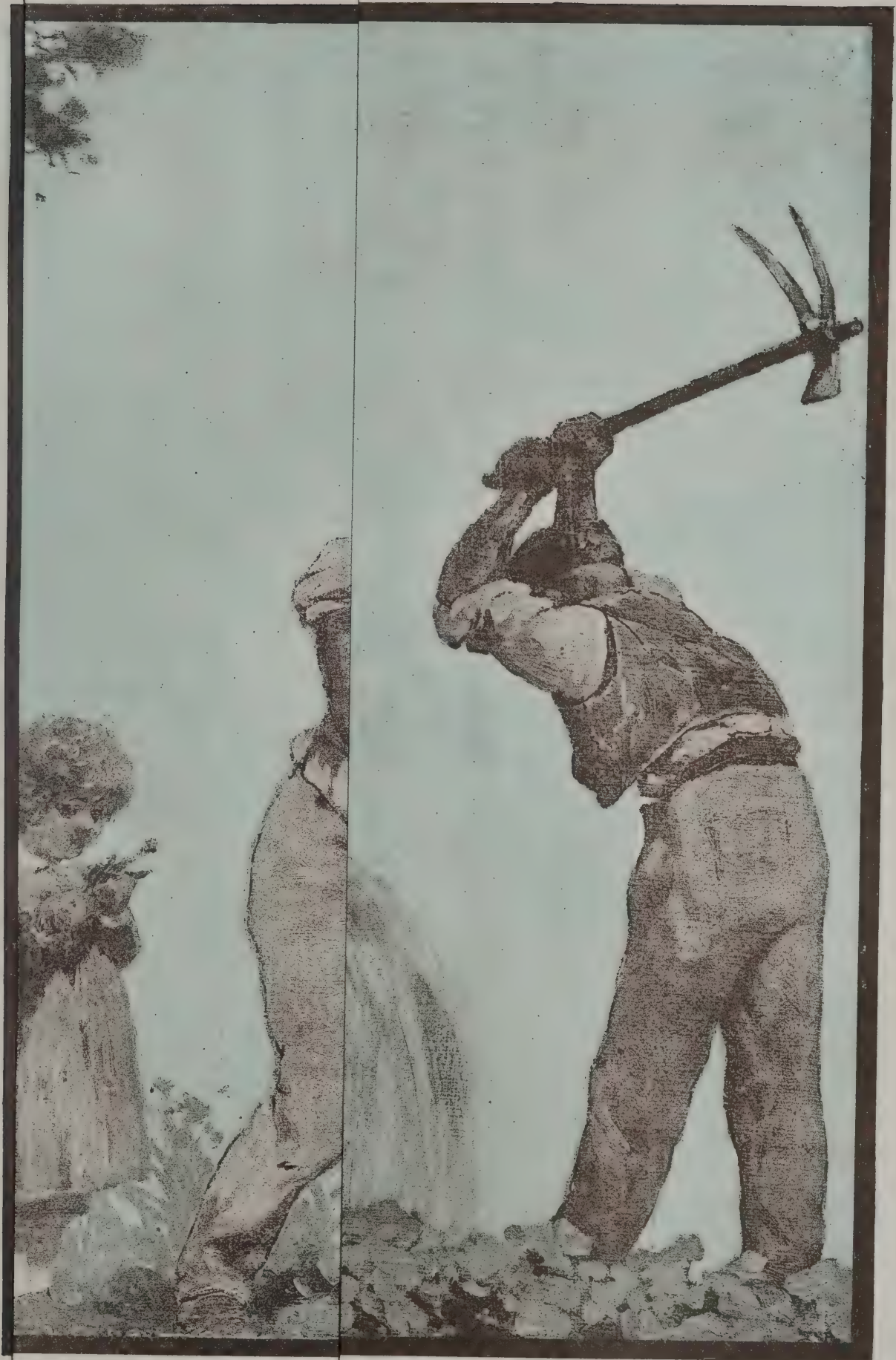
Two documents possessing great artistic interest, inasmuch as they give the prices paid for the works of the great Dutch masters during their lifetime, or shortly after their decease, have lately been found in Holland. One is the official catalogue of a lottery organised in the year 1649 by JAN DE BANDT, of the Hague. The list enumerates as prizes various works of art, among them being several paintings which in our day rank as masterpieces. Opposite each work is placed an estimate of its value, as fixed by a committee of artists specially designated for the purpose, and the following may be taken as a sample of their opinion:—*The Alchemist*, by TENIERS, 25 florins; *Peasants*, by the same, 25 florins; a large battle-piece, by CUYP, 52 florins; five other works of same artist, 45 to 52 florins each; and two works by JAN VAN GOYENS, 10 and 25 florins respectively. The other document, which was found at Rotterdam, is entitled "A List and Inventory of Pictures, with the prices I paid for them," but the name of the author is unknown. Various items of this catalogue are worthy of quotation:—A seascape, by VAN DER VELDEN, 400 florins; a battle-piece, by PHILIPPE WOUVERMANS, 44 florins; the *Femme au Verre*, by GABRIEL METZU, 8 inches high by  $7\frac{1}{2}$  inches in width, 106 florins; peasant scene, a masterpiece of VAN OSTADE, 70 florins; and the interior of a peasant's cottage, by TENIERS, 70 florins. From this it will be seen that TENIERS' works were more esteemed, the price of a good painting by him having risen from 25 florins, given in 1649 for *The Alchemist*, to 70 florins, paid about the year 1750 for the peasant interior.

THE members of the Royal Commission on Technical Instruction have not been idle during the past month. Considerable progress has been made in the collection and arrangement of the vast amount of information collected by the Commissioners during their visit to France, Germany, Austria, Switzerland, and Italy. They have recently been engaged in pursuing their investigations here and abroad. Professor ROSCOE and Mr. SWIRE SMITH are occupied in reporting on the industries and schools in the neighbourhood of Kendal and Barrow. Mr. WOODALL, M.P., and Mr. REDGRAVE are at present travelling in the Black Forest, where they are collecting information with respect to the native home industries of the district, principally with the view of ascertaining if similar industries, under necessarily altered circumstances, might advantageously be introduced into any parts of the United Kingdom. Mr. B. SAMUELSON, M.P., and Mr. PHILIP MAGNUS have been spending some little time in Ireland, where they have been instituting inquiries into the possibility of improving the material condition of the labouring classes by the establishment of trade schools and the introduction of new means of livelihood among the agriculturists of the poorer districts of the country.

At a late meeting of the French Antiquarian Society, M. MUNTZ read a paper on "The Tomb of Pope BENOÎT XII. at Avignon." Some accounts of expenses found by M. MUNTZ in the archives of the Vatican, and dated 1342 and 1343, prove that the tomb is the work of a Paris carver or sculptor—JEAN LAVENIER by name—hitherto totally unknown. While the painters employed by the Avignon Popes—residing, be it remembered, on French soil—were almost invariably Italians, it is noteworthy that their architects and sculptors were generally French. In this fact M. MUNTZ sees a fresh proof of the superiority of France in art.



Sept<sup>r</sup> 9<sup>th</sup> 1882.



CULTURE.

LES DIDIER.

*Les Didier, 1882.*





HENRY FORD.



## ILLUSTRATIONS.

AGRICULTURE, DECORATIVE FRIEZE: HORTICULTURE.

THE illustration published this week completes the series painted by M. JULES DIDIER, and we are glad to be able to announce that the work has been fully appreciated by the English public.

## JAPANESE GOLD LACQUER-WORK.

A REPORT has been prepared by Mr. J. J. Quin, Acting Consul at Hakodate, on the lacquer industry of Japan. It is intended chiefly as a description to accompany a collection of illustrative specimens, tools, and products at the Economic Museum at Kew. The cultivation of the lacquer-tree and the manufacture of the various kinds of lacquer is described, the woods used for the production of lacquer ware, and the various processes of lacquering, from the ordinary plain work to the treatment of gold lacquer. In drawing up the report it was found that a number of Japanese terms had to be employed which necessitated a somewhat detailed explanation, so as to be intelligible to any one not acquainted with the language and not familiar with the technicalities of the trade. The following extracts on the gold lacquer work, describing the mode of treatment, may be of interest:—

*Mode of making Gold Lacquer.*—A description is given first of *Togi-dashi* (bringing out by polishing). The article, having been already subjected to twenty-two processes of ordinary lacquering, is then treated as follows:—The picture to be transferred to the article is drawn on thin paper, to which a coating of size made of glue and alum has been applied—that known as *Mino-gami* is best. The reverse is rubbed smooth with a polished shell or pebble, and the outline very lightly traced in lacquer, previously roasted over live charcoal to prevent its drying, with a fine brush made of rats' hair. The paper is then laid, with the lacquer side downwards, on the article to be decorated, and is gently rubbed with a whalebone spatula wherever there is any tracing, and on removing the paper the impress may very faintly be perceived. To bring it out plainly it is rubbed over very lightly with a piece of cotton wool, charged with powdered white whetstone or tin, which adheres to the lacquer. Japanese paper being peculiarly tough, upwards of twenty impressions can be taken off from one tracing, and when that is no longer possible, from the lacquer having become used up, it only requires a fresh tracing over the same paper to reproduce the design *ad infinitum*. This tracing does not dry, owing to the lacquer used for the purpose having been partially roasted, as previously mentioned, and can be wiped off at any time.

The next process is to trace out the veining of the leaves, or such lines to which in the finished picture it is desired to give the most prominence, and these lines are powdered over with gold dust through a quill. The qualities called *Mijin*, *Koma-kame-mijin*, and *Aragoku*, are generally used; either finer or coarser qualities cannot be used. The article is then set to dry for twenty-four hours in the damp press. The outline is now drawn carefully with a rat's hair brush over the original tracing line with a mixture of black and branch lacquer, called *Rō-sé*. The whole is then filled in with *Rō-sé* applied with a hare's hair grounding brush. Gold dust of a slightly coarser quality than *Mijin* is scattered over the lacquered portion, and the article is set to dry for twenty-four hours. Another thin coating of *Rō-sé* lacquer is again given to the gold-powdered portions, and the article set to dry for twelve hours. Next, a coat of *Rō* (black lacquer) is applied over the whole surface of the article, which is set to dry for at least three days. It is then roughly ground down with *Magnolia* charcoal, the surface dust being constantly wiped off with a damp cloth till the pattern begins to appear faintly. Another coating of *Rō* lacquer is then given, and the article set to dry for thirty-six hours. It is again ground down with *Magnolia* charcoal as before, this time till the pattern comes well out. The ensuing processes are the same as described in black lacquer.

In making *Togi-dashi* on hard woods, transparent lacquer is used instead of *Rō*.

*Flat Gold Lacquer.*—For this method, called *Hira-makiye*, the article having been thoroughly finished, either in black or red, &c., a tracing is applied to the surface as in *Togi-dashi*, the outline is carefully painted over with a fine brush of rat's hair and then filled in with a hare's hair brush, using *Shitamaki* lacquer (branch lacquer and red oxide of iron). Over this surface, gold dust, of the quality called *Aragoku*, being generally used, is scattered with a brush of horse's hair (*Kebo*) till the lacquer will not absorb any more. The article is then set to dry for twenty-four hours. A thin coating is next applied over the gold, of transparent lacquer, or *Yoshino* lacquer, and set to dry for twenty-four hours at least. It is then most carefully smoothed with camellia charcoal, and finally polished off with *Tono-ko* and a little oil on the point of the finger, till the ornamented portion attains a fine polish. The veining of leaves and the painting of stamens, &c., of flowers, or such other fine work, is now done with a fine rat's hair brush charged

with *Ke-uchi* lacquer, over which fine gold dust (*Goku-mijin*) is scattered from a brush of horse's hair (*Kebo*) as before, and the article set to dry for twelve hours. Some *Yoshino* lacquer is then applied to a piece of cotton wool, and rubbed over the whole surface of the box or other article, and wiped off again with soft paper. It is set to dry for twelve hours, after which it is polished off with deer's horn ashes and a trifle of oil. When very high-class work is desired, *Yoshino* lacquer, to which a little water has been added, is applied, and polished off a second time, and a very brilliant surface is attained.

More ordinary "flat gold lacquer" differs in the manufacture as follows:—The tracing is accomplished in the same manner, but *Shitamaki-nobe* lacquer (branch lacquer, red oxide of iron, and camphor) is used for filling in the pattern with a hare's hair brush. The article is then set to dry in the press for ten to twenty minutes, during which time the lacquer has begun to harden, and less gold will adhere. Then gold dust (*Goku-mijin*) is applied with cotton wool thinly, and the article is set to dry for twenty-four hours. The whole surface is then smeared over with *Yoshino-nobe* lacquer (*Yoshino* lacquer and camphor) on a piece of cotton wool, and wiped off again with soft paper. The reason is that it is less trouble to smear over the whole surface thinly, and it is, moreover, not necessary to give a thick coat of lacquer to the decorated part, as the gold dust has been very thinly applied. It is set to dry for twelve hours, and ground smooth with camellia charcoal, and polished with powdered whetstone and oil on the point of the finger. The fine lines are then drawn with a rat's hair brush charged with *Shitamaki* lacquer, and sprinkled with gold dust (*Goku-mijin*) from a brush (*Keto*), and the article set to dry for twelve hours. The whole is again smeared with *Yoshino-nobe* lacquer, and carefully wiped off again with paper, and set to dry for twelve hours. The article is then polished with powdered whetstone and oil on the point of the finger, and a second application of *Yoshino-nobe* lacquer with a little water, wiped off with soft paper, set to dry for twelve hours, and finally polished off with deer's horn ashes and oil on the finger, finishes the operation.

Should it be required to make any dark spots or lines, such as birds' eyes, or to draw human hair, &c., or other shading, this is done last of all with *Kuma*, "bear" lacquer, and *Jō-hana*, and lamp-black.

For a more common kind of flat gold lacquer painting, instead of tracing the design in roasted lacquer, it is done with a mixture of powdered *Tono-ko* (burnt clay from Mount Mari) and water, and the impression is transferred to the articles with the whalebone spatula as before. The reason for only using *Tono-ko* instead of lacquer is that the groundwork being inferior it cannot be ground or smoothed afterwards, and the edges of the pattern would not be clean, nor stand out clear, should any lacquer get smeared outside the tracing line. The outline is then filled in with *Shitamaki-nobe* lacquer with a coarse hare's hair brush, and the article is set to dry for twenty minutes, or till a thin skin has formed on the lacquer, and then the half-dry surface is wiped over with cotton wool charged with *Keshi-fun*, the finest gold powder, and set to dry for five or six hours. The whole surface is then smeared with *Yoshino-nobe* lacquer, which is carefully wiped off again with soft paper, and the article set to dry for half a day. The surface is then rubbed over gently with deer's horn ashes and soft paper to give it a polish, and to get rid of any of the last coat of *Yoshino-nobe* lacquer.

The fine lines are now drawn with a fine hare's hair brush charged with *Shitamaki-nobe* lacquer, and the article set to dry for twenty minutes or so; then *Keshi-fun* is applied with cotton wool, and again set to dry for five or six hours. No further process takes place.

*Raised Gold Lacquer.*—In the method *Taka-makiye* the ground-work may be either black or coloured lacquer, *Nashiji* (pear basis of gold dust), or the plain wood. The outlines of the pattern are transferred to the surface of the article in the same manner as in *Togi-dashi*, or "flat lacquer." The outline is then painted over with *Shitamaki* lacquer, and this is covered with powdered camellia charcoal. If the outside is to be higher than the inside, a broad margin is painted and covered with the charcoal powder, leaving the centre untouched, and *vice versa*; if the centre is to be higher a faint line only is painted outside, and the inside is given a thickish coating, which is sprinkled with the charcoal dust, and the article set to dry for twelve hours. When taken out of the press it is well dusted to get rid of any loose charcoal powder, and is also washed, using a brush made of human hair (*Hake*) to clean out all crevices and bring out the lines, &c. Some *Yoshino-nobe*, or "branch lacquer," with camphor, is now rubbed on with a piece of cotton wool and carefully wiped off with soft paper, and the article set to dry for twelve hours. The raised parts are next carefully ground smooth with a piece of *Magnolia* charcoal, and a second coat of *Yoshino-nobe*, or of "branch lacquer," is applied as before and dried.

[If a well-raised pattern is required, one, two, or even three coats of *Sabi* ("branch lacquer" and *Tono-ko*) are applied, the outside edges being painted with a brush of deer's hair (*Menso*), and the inside lacquer applied with a small *Sabi* spatula, the article being set to dry between each application for twelve hours. For coarser work it is then ground smooth with a white whetstone, and



for finer work with a yellow whetstone. Over this some "branch lacquer," mixed with camphor, is rubbed with cotton wool and wiped off with soft paper, and the article set to dry for twelve hours.]

If the pattern is not to be very high the operations described between the brackets are omitted. A coating of *Takamaki* lacquer is now given, the outside hedges being carefully drawn with a rat's hair brush, and the inside of the pattern filled in with a hare's hair brush, and the article set to dry for thirty-six to forty-eight hours. When taken out of the press the surface is ground smooth with *Magnolia* charcoal, and then partly polished with powdered camellia charcoal on a cotton cloth. A little oil is now rubbed on, and a further polishing takes place with powdered "whetstone" on a cloth. Next "branch lacquer" is rubbed over the raised parts with cotton wool and wiped off with soft paper, and the article set to dry for twelve hours. It is next polished with deers' horn ashes and a little "rape seed," or "sesamum" oil applied on the point of the finger. Up to this point the formation of the pattern, whether mountains, waves, trees, men, birds, or animals, has been gradually completed.

If small squares of gold foil (known as *Kiri kane*), or of coloured shell, are used in producing the pattern, they are now applied one by one on the point of a bamboo stick (*Hirame fude*), the spot where they are to be affixed having been smeared with a little *Rō-sé* lacquer to make them adhere. When all that is required has been affixed, a piece of soft bibulous paper is spread over the freshly-done parts and pressed very carefully with the finger. This is to get rid of as much of the *Rō-sé* lacquer as is not covered by the gold squares as possible; the article is set to dry for twelve hours, and then the portion where the gold has been applied is gently polished with a little camellia charcoal on the point of the finger, to get rid of the remainder of the *Rō-sé* lacquer. Shell patterns, and the coarser kinds of gold dust that may be required, are applied in the same manner. The finer kinds of gold dust are applied next, over a coat of *Shitamaki* lacquer, and the article set to dry for twelve hours. The remaining processes of polishing, drying, &c., are the same as in first-class "flat gold" acquer.

For making raised lacquer patterns on plain wood the whole surface is covered with tinfoil, stuck on with rice paste, to keep the wood quite clean, and then the place only where the pattern is to come is cut out. In making all high-class lacquer the edges of every article are pasted over with tinfoil to prevent their being rubbed or injured by the workman, and the same is done over each portion as it is finished.

The above is the ordinary method of making best raised lacquer, but there are such innumerable modifications of one process or another, according to the object to be produced, that it is manifestly impossible to do more than give the above cursory sketch. Nearly every piece of good lacquer made exhibits a specimen of each kind, viz., *Nashiji*, *Togi-dashi*, *Hira-makiye*, or *Takamakiye*.

In making raised lacquer on inferior articles the methods do not vary much from the good kinds; the work is merely less carefully executed. The saving is in the quantity and quality of the gold dust used, and the absence of minute after-work, or in the use of silver and tin instead of gold dust. In the very cheapest kinds burnt tin dust is used instead of charcoal over the first coat of *Shitamaki*. This is burnished bright, and over it a thin coating of lacquer and gold dust is applied. At first it looks well, but loses its colour in a year or two. By using tin powder the same height is attained in one coat that would necessitate at least three coats of lacquer and charcoal dust. This kind of work is, however, only used for cheap articles for foreign export, and has been quite lately introduced.

**Lacquering on Metal.**—For lacquering on iron or copper, brass or silver, the metal is smoothed and polished, and then given a coating of "crude lacquer," or "black lacquer"; the article is put over a charcoal fire, and the lacquer is burnt on to the metal till all the smoke ceases to escape. The fire must not be too fierce, and the metal must not be allowed to get red-hot, or the lacquer turns to ashes. After the lacquer has burnt quite hard the surface is rubbed smooth with *Largerstramia* charcoal; these operations are repeated three or four times, till a good foundation of lacquer has been obtained. Then the same operations exactly are repeated as in making best "black lacquer." *Togi-dashi*, "flat gold lacquer," or "raised gold lacquer," only that the lacquer is burnt dry over the fire instead of being dried in the press. The lacquer is thus rendered quite hard and very durable. After the first two or three coats have been burnt on, the subsequent drying processes can be carried on in the damp press, should it be so desired.

In winter, or when any article is required in a hurry, the workmen sometimes put a charcoal fire in the press, over which a pan of hot water is placed. The steam which is thus generated helps to dry the lacquer in an hour or two, which would take twenty-four hours to harden ordinarily, but the lacquer thus dealt with loses its strength, and is never very hard. "Black lacquer" turns a rusty brown, the colouring virtue of the iron being apparently lost, and therefore this plan is never adopted for good work, and in second-rate work only for under coats.

The style of ornamentation, *Nashiji*, occupying an intermediate position between plain and ornamental lacquer, is therefore treated of last. Till the opening of Japan to foreign trade it was in the hands of workers in gold lacquer, but now for the most part all *Nashiji* on articles intended for exportation is applied by the workers in plain lacquer. In making best *Nashiji* as in *Togi-dashi*, the first twenty-two processes are identical. A coating of *Rō-sé* is applied, and the gold dust is sprinkled over this surface through one or other of the bamboo tubes, according to the fineness required. The article is set to dry in the press for forty-eight hours, and is then given a coating of pure transparent varnish. This is set to dry for three or four days, when it is roughly ground with *Magnolia* charcoal, and a second coat of transparent lacquer given. The article is set to dry for forty-eight hours, and then ground with *Magnolia* charcoal till a perfectly smooth surface is obtained. Transparent lacquer is then applied with a piece of cotton wool, and wiped off again with soft paper, and the article set to dry for twenty-four hours. It is then polished with a mixture of *Tono-ko* and camellia charcoal powder and a little oil. Next, a coating of *Yoshino* lacquer is given, and wiped off with paper; the article is set to dry for twelve hours, and then it is polished with deer's-horn ashes and oil. This is repeated three times to finish the article.

The same processes are gone through when using silver instead of gold dust. For cheap qualities tin dust is used, and the powder is scattered on glue immediately above a coating of *Kanoji* (whiting and glue). When the article is dry it is burnished with *Tokusa* (*Equisetum*), and as soon as it presents a bright surface a coating of pure transparent lacquer, with gamboge, is given to it. It is set to dry for a day in the press, and then ground with *Magnolia* charcoal. Over this a coating of *Shu-urushi* (transparent varnish containing oil) is applied, and another drying for twenty-four hours completes the process.

## MANCHESTER CATHEDRAL.

THE following memorandum in explanation of the proposed restoration has been forwarded to the committee of the Society for the Protection of Ancient Buildings by the Cathedral authorities:—

The parish of Manchester was anciently a rectory. It was taxed by Pope Nicholas IV. in the year 1291. In 1307 the barony of Manchester, together with the advowson of the rectory of Manchester, became the property of the Lords de la Warre, and in 1421 one of this family got the church converted from a parish to a collegiate one, and the foundationers were styled "The Guild or Company of the Blessed Virgin in Manchester." The collegiate buildings are a short distance from the church, and still remain the most interesting and perfect ancient buildings in Manchester. These are in active use as schools and domiciles for one hundred poor boys under Humphrey Chetham's bequest, and for the housing of a fine old library founded and supported by money from the same generous benefactor. The chancel of the church was constructed by John Huntingdon prior to 1458, in which year he died. At the dissolution the collegiate became a rectory, and again, after the marriage of Philip and Mary, it was re-established, while Queen Elizabeth, on the humble petition of the people of Manchester, granted a renewed charter of foundation, and the church was re-dedicated and became from that time to this Christ's Church. In 1617 a gallery was added to the church, chiefly at the cost of Mr. Humphrey Booth. In the present century the work of restoration began. Briefly the cathedral may be described as follows:—The original plan consisted of nave and choir of equal length, with side aisles and a western tower. There were no transepts. After the church was thus completed, chapels were founded and added so as to form double aisles to the nave and choir, excepting a small portion at the south side, and at the east end a lady chapel was erected. It is built of brown sandstone from Collyhurst, about a mile from the cathedral. The style of architecture is Perpendicular; but not being intended for a cathedral, it is not one of the finest examples of that style, but looks like what it was built for, a fine parish church. The woodwork in the main church is not remarkable, but is interesting, which cannot be said of its stained glass. The woodwork in the choir, however, is of a very high order. The second aisle in the north side of the choir is filled by the Derby chapel, and it is as long as the choir itself. This chapel has been rebuilt in accordance with the original design at the expense of the Derby family. The lady chapel was built about 1520. It is square, with late Perpendicular windows. It has been carefully preserved, and recently slightly restored. Most of the exterior of the cathedral is modern, the western tower entirely so, having been built by the Chapter architect, Mr. James P. Holden, about twenty years ago. Mr. G. G. Scott, R.A., thought at the time that it might have been restored, but it was thought better to rebuild it. The present tower is not a copy of its predecessor. It is a fine structure, and is 137 feet high. The restoration now proceeding has been undertaken by the churchwardens, at the instance of the present architect of the Chapter, Mr. J. S. Crowther, of Alderley, who is as much interested in retaining the



old form and quality of the building as the safety of the structure will permit. It appears that the pillars and arches of the nave, including the clerestory, were in the early part of the present century deeply chipped and covered with plaster. This plaster has been recently removed in order to ascertain the condition of the building. It was then found that in several ways the structure was not safe, and that the mutilation at the time of plastering, and which included the knocking away of all capitals, was so great that the building was neither safe nor presentable. To get rid of these chipped and plastered surfaces it was decided to rebuild the pillars, arches, and clerestory in the nave, stone by stone and line by line, upon the old work, all details being based on those of the old building. The old pillars had been laid without any structural foundation and were not safe; indeed, there is just a suspicion of "jerry" about the job. There are four pillars rebuilt already, and the stone used is a red sandstone similar to that of the original building. These are all the alterations or restorations decided upon at present, but in time the work will probably extend much further. The Dean, Canons, and Churchwardens are the responsible people for the alteration, and they have every confidence that their architect, Mr. Crowther, will do all he can to preserve the ancient beauties of this fine old church.

### IMPROVEMENTS IN GAS LIGHTING.

A PAPER was read by Mr. William Sugg at one of the meetings of the Mechanical Section of the British Association on improvements in gas illumination. He pointed out that the great hindrance to improvements was the public, who supplied themselves with the cheapest burners and stoves and then blamed the quality of the gas. After describing certain improvements in burners, he said the progress of invention in gas lighting was great and continuous, and in the future, if the public would only interest themselves just sufficiently to obtain a moderate amount of information on the subject of gas, they would be enabled to use it with great economy and comfort to themselves. The facile manner in which gas could be employed to produce the light of a rushlight or the blaze of a thousand candles by the mere turn of the wrist, joined to the readiness with which it could be conveyed to great distances without any practical loss, would always ensure for it a large and growing demand everywhere.

### SCOTTISH SOCIETY OF WATER-COLOUR PAINTERS.

THE members and associates of the Scottish Society of Water-Colour Painters met together at the annual luncheon in the Fine Art Institute, Glasgow, on the 1st inst. Mr. F. Powell presided. The chairman first proposed the toast of "The Queen," and next "The Royal Scottish Academy." The Academy, he said, had done so much for art in Scotland, that it was almost impossible to estimate its beneficial influence. The success of the Royal Scottish Academy was now firmly established. The institution could boast of a great many celebrated artists who had belonged to it, and there were still many celebrated men connected with it, so that all Scotchmen had reason to be proud of their Academy.

Mr. Hugh Cameron, R.S.A., replied.

Mr. W. E. Lockhart, R.S.A., proposed "The Glasgow Institute of the Fine Arts." The Institute had now come to occupy a very important position in this country. Under the present régime it had earned for itself the thorough respect not only of the citizens of Glasgow, but of all artists and all Scotchmen. As a Scotchman and as a member of the Academy in the east, he wished the Institute every success.

Mr. James Muir, C.A., replied. The Institute of the Fine Arts was one of those societies which rendered possible such an institution as that in connection with which they were met that evening. It would be remarkable if artists did not recognise the disinterested friendliness with which gentlemen, who had cares of a very much more serious nature, devoted a large portion of their time in furthering the cause of art.

Mr. D. E. Outram proposed the "Scottish Society of Water-Colour Painters." He earnestly desired to see the city keeping pace in the cultivation of the fine arts with its commercial prosperity. It had scarcely done that yet, but it was making very great strides. In the matter of music the city had taken a position which really put it in the first rank, and such societies as that in connection with which they were met would put it in the first rank as regarded paintings and painters. Long might the Scottish Society of Water-Colour Painters continue to extend its influence throughout the country. The society had been very much indebted to many of its members for their exertions in its behalf, and he would mention specially Mr. Walker, of the Institute, Mr. Smith, the secretary, and above all, their chairman, the president of the society.

The Chairman responded. He said that water-colour painting had been making great advances. A few years ago water-colours were very little known and very little practised, but on looking at the paintings around them they would agree that very great strides

had been made. There had always been a fear that water-colours were not permanent, but this had been proved to be a mistake. The oldest picture exhibited at the Royal Academy in London last year was a water-colour, *The Adoration of the Shepherds*, painted in 1450, and it showed very few signs of decay. The Chairman afterwards proposed the toast of "The Guests."

Sir Peter Coats, in responding, said that he had always been a great admirer of the fine arts, and he had contributed his little aid and countenance to their encouragement and advancement.

Among the other toasts were—"The Chairman," proposed by Mr. James Sellars; and "The Croupier," proposed by Mr. Robert Greenlees.

### TESTING OF IRON.

IN 1872 the attention of the United States Government was drawn to the necessity of providing an accurate testing-machine, in order to ascertain the strength of the iron and steel used in buildings, bridges, and other structures. After some delay a machine was completed, which for accuracy of the results obtained and range of power exerted is unequalled, perhaps, in the world. Owing to the length of time expended in completing it, however, the original appropriation became exhausted, and the Board was legislated out of existence, having had scarcely an opportunity to verify the capabilities of the very instrument which had been brought to perfection under its fostering care, and through the proper use of which so much valuable information could be obtained. Although the Board had ceased to exist, the machine remained the property of the United States. It is located in the Watertown Arsenal, near Boston, under the immediate charge of the Ordnance Department of the army, and is nominally at the service of engineers and others who may be able to defray the necessarily heavy expense of working it for their own private benefit. But as there are no assistants permanently engaged to form a staff, the cost of tests is excessive. Over seven days were required to test nine steel eye-bars, and the cost was fifteen dollars per bar.

The American engineers are again calling the attention of the Government to the subject, as an immense quantity of iron is employed yearly throughout the States. In the department of bridges there were required for last year's construction not less than 80,000 tons of iron and steel, representing, say, 50 miles of bridges, over which the safety of life and limb is supposed to be assured by the accuracy of the calculations of the designer, no less than the quality of the material employed. Of this material upwards of 35 per cent. is in the form of compound sections specially adapted to resist compressive strains; and yet until quite recently all the experimental data upon which such sections are designed were obtained through the instrumentality of testing-machines which, particularly at high pressure, are liable to give very erroneous results. Of rolled beams there were produced last year upwards of 50,000 tons. This form of product is used chiefly in floors of buildings, often to sustain great weight, as in warehouses, and somewhat also as stringers in bridges. Their strength is estimated by theoretical formulas, in which the physical constants are taken from experiments upon foreign irons tested under circumstances entirely different from what are obtained in actual practice. Fortunately for the cause of safety in the use of such materials, it is probable that the formulas in question do not represent the full strength, and that a considerable amount of unnecessary weight is loaded upon our structures in consequence; but there is all the more reason why the actual strength should be determined by experiment, in order that an uniform factor of safety may apply to every member of a structure, or, in other words, that it shall be equally strong in all its parts.

At a late meeting, General Meigs, in supporting an appeal to Congress, said the Government itself is the largest single user of these materials; the railroads altogether use more, but there is no single organisation which uses so much. Congress appropriates the money with which are erected the large Government structures that are found now in almost every city. It is stated in the public press that it is in contemplation to erect a hundred new Government buildings in a hundred cities this year. In all these buildings the floors are supported upon rolled iron beams, and the principal materials used for roofs are iron. These buildings are all dependent for their cost upon the size of their dominant members, and, as a consequence, upon the factor of safety which the architect allows; so that as long as there is uncertainty as to the proper coefficient of safety, perhaps from two to five times as much metal as is actually necessary may be put into these members. There are other materials used in buildings—brick, stone, marble, timber—but these materials we buy by the cubic yard or cubic foot; they are comparatively inexpensive. Metal we buy by the pound, and at this time we pay pretty high prices for the pound; so that if we can reduce our general coefficient of safety, we save perhaps one-half to two-thirds of the actual cost of the material used. Congress sits under a roof of iron; its building is crowned by an iron dome. It is about building a new Navy, and is considering whether it shall be of steel or of iron, and the result will depend upon the comparative qualities of steel and iron.



M. O. Chanute in describing his own practice said that while no man knows exactly what weight will crush flat, say a 4-inch cube of wrought iron, we do know that it begins to yield, without recovering its shape, at pressures of some 36,000 to 40,000 pounds to the square inch. Accordingly, with the aid of the formulas in common use we proportion compression members for an assumed crippling point, varying from say 35,000 pounds to the square inch, for pieces of ten diameters in length, down to about 24,000 pounds to the square inch for pieces forty diameters in length, and upon these we allow strains varying from 7,000 to 4,800 pounds to the square inch, as working compressive loads; while in tension we allow some 10,000 pounds to the inch on iron, with a breaking strength of 46,000 to 50,000 pounds, and an elastic limit of 26,000 pounds per square inch. Now, in my judgment, the crippling point of a compression piece corresponds more nearly with the elastic limit in tension, than with the ultimate or breaking strength. The probabilities of any compression bridge member being strained up to the crippling point, are nearly as remote as the probabilities of a tension member being strained up to its elastic limit, and to have all parts equally strong, should experiments justify this view, we should base our assumed margin of strength (you will note that I do not use the term "factor of safety," as I think it misleading) upon the *crippling* strength and the *elastic limit* of the material. As for myself, I believe that we are now making our compression members considerably stronger than the tension members; that if we were to break down a bridge by fair loading, granting of course that all the *connections* should be made stronger than the body of the pieces they attach together, rupture would probably first take place in one of the tension members. But then while so believing, I do not *know*. I confess my ignorance upon this point, and until this ignorance is removed I shall go on specifying for proportioning bridges in the old way, and with the old formulas. Not only is there great uncertainty concerning the actual strength of compression members, but we do not know accurately the strength in tension of full-sized bars worked to various dimensions and with a different amount of pulling and squeezing in the rolls.

## SCULPTURE FOR THE ST. GEORGE'S HALL LIVERPOOL.

A MEETING of the Liverpool City Council was held on Wednesday, when the recommendation of the Finance and Estate Committee to award the premiums for designs for sculptured panels at St. George's Hall to Mr. T. S. Lee (200*l.*), Mr. J. Milo Griffith (100*l.*), and Mr. W. S. Frith (50*l.*) was agreed to. The same committee also recommended that, subject to satisfactory terms being agreed upon, and the approval of the remaining designs as suggested by the artist, Mr. Thomas Sterling Lee be entrusted with the execution of the work.

Sir James Picton, in moving its adoption, stated that Mr. Lee was a student of the Royal Academy, where he took a very distinguished place, obtaining the gold medal against all England. He also obtained a still more striking prize in the shape of a travelling scholarship, enabling him to travel for three years through the principal centres of art on the Continent of Europe. He spent a considerable time in Greece studying ancient subjects, after which he went to Paris as a student there, and took a silver medal in competition with the whole of the students in Paris. He (Sir James) thought it would be scarcely possible to conceive a more distinguished career for a young man than that. He appeared most enthusiastic in his art; but the question was, Was he competent to carry on the work? No. 1 were rough designs, but still he considered them the work of a man of genius. The committee only stipulated for seven designs, intending to repeat them four times over, there being twenty-eight panels in all; but Mr. Lee was prepared to give them a separate design for every panel, as he did not wish to see the panels multiplied. If they were to take the work out of Mr. Lee's hands he would have a right to complain, as it might be looked upon as a slur on his ability. Again, what would be thought if the execution of the work were entrusted to the gentlemen taking the second or third prize? On the whole, therefore, they had come to the conclusion that, in order to carry out the wishes of the Council to the fullest extent, the execution of the work should be in the hands of the artist himself.

Alderman Samuelson seconded.

Alderman A. B. Forwood said if they were to pass the recommendation the Council would have relegated its entire function to the three gentlemen forming the sub-committee. They were appointed to act as judges for the awarding of the premiums, and not for the carrying out of the successful design. The Council had performed their contract with these gentlemen as regards the designs, and now they were quite free to elect any or none of them to carry out the work. They had to regard the people who saw St. George's Hall; and without a person having a catalogue he certainly would not be able to understand the very visionary and shadowy designs represented by No. 1. If they turned to No. 2, no such catalogue would be needed, as the designs stood out in relief.

Alderman Samuelson: The answer to that is simple. Of course it is impossible to give some persons brains to know what a man means. He maintained that the committee did not exceed its powers.

Mr. J. B. Smith said he would like to know what material these sculptures were to be made of. He supposed the committee had fully considered that point, as they were to be out of doors. He could not but think that in a few years they would be an eyesore rather than otherwise from the dirt that would settle upon them.

Alderman Samuelson said that No. 1 were likely to keep longer clean than those that stood out in bolder relief.

Mr. J. B. Smith: I question whether it is not a great waste of money to put sculptures of that kind out of doors in England.

Mr. P. H. Rathbone thought there was a great deal in what Mr. Smith had said, and that made it all the more important that No. 1 should be selected.

Mr. Whitley thought they ought to be guided by the opinion of the special committee to which the matter was referred.

Mr. Ball asked what would be the probable cost of executing the work?

Sir James Picton said the cost was a matter which would come up hereafter, and no expense would be incurred without first coming before the Council. They had no authority at present for entering into contracts for any amount whatever. The Manchester Town Council were expending 10,000*l.* in the decoration of their great hall with frescoes. He thought a work of that kind should not be taken up in any niggard spirit; and though he did not want to be extravagant, still the work should be done in a manner worthy of the city.

The recommendation was then confirmed.

## THE ROYAL INSTITUTION, MANCHESTER.

THE Royal Institution property is now, by the operation of the new Act, vested in the Corporation. By a clause in the agreement of November 16, 1881, the Society of the Royal Institution have the right of carrying on its usual exhibition of pictures and works of art in the building until the end of the current year, the Society paying all expenses thereof, and receiving all profits therefrom. The Town Clerk has been instructed to forward a copy of the Act to the secretary of the Royal Institution. It is desirable that the selection of the fourteen members of the Art Gallery Committee, to be appointed by the Council on November 9, 1882, should be made prior to that date. The Royal Institution Sub-committee of the Corporation recommend that the fourteen members of the Art Gallery Committee to be appointed by the Council on November 9, 1882, be as follows—viz., the Mayor, Aldermen Baker, Heywood, Bennett, King, Patteson, Worthington, and Thompson; Councillors Schofield, Goldschmidt, Croston, Stewart, Rowley, and Windsor. The Committee also recommend that under the direction of the Mayor arrangements be made for the transfer of the existing policies of insurance on the Royal Institution building and effects to the Corporation by the Act, or otherwise, for the insurance thereof.

On the motion of the Mayor, seconded by Mr. Alderman Thompson, the proceedings of the Committee were approved and confirmed.

## SANDOWN CASTLE.

A PLEA for the preservation of the remains of Sandown Castle, Deal, which are now threatened with destruction, has been raised by Professor Hayer Lewis. He says:—To those who are unacquainted with it I need only quote some few words of the statement which announces the proposed spoliation: "It is one of those grim-looking piles, erected by command of Henry VIII., which still lend an antiquarian charm to our south-eastern coast. The masonry, notwithstanding its great age and the influences to which it has been exposed, is a marvel of good workmanship." I know the castle well. The main outline is very peculiar, and although the upper portion was destroyed years back, the greater part of the substructure is intact, retaining many features which are very interesting. The difficulty will be, not in preserving, but in destroying it. To the townsmen it ought to be an object of the greatest care, for Deal and Walmer Castles have both been converted long since into private residences; the principal church, usually the most attractive building in a town, is graphically described in "Murray" as "a Georgian structure of the most barbaric character"; and although the narrow streets of Deal and its few gabled houses offer some picturesque subjects to the artist, Sandown Castle is the only building of historical and antiquarian interest. The churches of Upper Deal and Walmer have, indeed, remains of twelfth and thirteenth centuries work, but these have been added to and improved by former rectors and churchwardens, whose names are proudly inscribed on the walls in a way so curiously ugly that I can call to mind no specimens which quite equal them. But these curious things are scarcely pleasing, though peculiar; and the one unaltered structure of real interest in or near the town is the one



which it is now proposed to destroy. I trust that this purpose may not be carried out, and that the old castle, mutilated as it is, may be preserved and cared for, were it only to show that our forefathers could build as strongly and as well as the Romans built at Richborough, hard by, and that an engineer of the olden time, in designing even a fort, could show that the beautiful need not be neglected in building the strong.

## CHURCH BUILDING AND RESTORATION.

**Inverkeithney.**—The new parish church has been opened. The style of the building is Gothic, and accommodation is provided for between 400 and 500 persons. The architects were Messrs. A. & W. Reid, of Elgin. Mason-work, Mr. P. Christie (of Messrs. A. Fordyce & Sons, Turriff); carpenter-work, Mr. A. Murdoch, Banff; plaster-work, Mr. A. Ross, Turriff; slater-work, Mr. A. Pirie, Fyvie; plumber-work, Mr. W. Alexander, Keith; and for plaster and glazier work, Mr. A. Chalmers, Banff.

**Bury.**—Considerable damage was done last January to St. Paul's Church, more especially to the windows and painted glass. Works of restoration have now been completed under the direction of Mr. Lawrence Booth, architect, of Manchester. Messrs. Edmundson & Son, of Manchester, restored the windows. A reredos, designed by the architect, has been executed by Messrs. Bonehill & Co., of Manchester.

**Helmsley.**—A chapel of ease has been opened at East Moors. The chapel has been designed by Mr. Wood, architect, and the works have been carried out by Messrs. Todd & Sons, builders, of Helmsley.

**Bilston.**—A new Wesleyan chapel is being built at New Village, the memorial-stones of which have just been laid. Accommodation will be provided for about 550 persons. The architects are Messrs. Loxton & Newman, of Wednesbury; and the builders, Messrs. Bradney & Co., of Wolverhampton.

**Coseley.**—The memorial-stones of a Wesleyan Chapel in course of erection at Woodsetton, have been laid. Messrs. J. Jones, contractors, of Sedgley, are the builders, and the architect is Mr. C. Round, of Tipton. The chapel, together with the school now in course of erection, will cost about 2,000*l*. The chapel will accommodate about 300 persons.

**Grangemouth.**—A new Free church is to be erected at Grangemouth at an estimated cost of 3,600*l*. The building is to accommodate 950 persons. The contractors are—For mason-work, Mr. John Lindsay, Grangemouth; joiner-work, Mr. Alex. Williamson, Grangemouth; slater-work, Mr. James Russell, Grangemouth; and for the iron pillars, Messrs. M. Cockburn & Co., Falkirk.

**Pontresina.**—The English church at Pontresina, in the Engadine, was consecrated by the Bishop of Bedford on August 19. A novel feature in the church is the substitution of wood for stone in the nave arches and clerestory. The plan is a parallelogram, 78 feet by 56 feet. There is no external indication of the chancel, as the site was so limited in length that it was necessary to carry the aisles to the full extent of the ground in order to gain the required accommodation. A porch occupies the second bay on the south side. The side walls are 2 feet 3 inches thick, of rubble with granite dressings; they vary in height as the ground falls rapidly from east to west, so much so, that there is a height of 20 feet below the floor at the west end. This is utilised as a store-room, and could be adapted for warming apparatus. It has wide pointed arches towards the west and at the sides. The style is Pointed, of the simplest character. The church is lighted by lofty triplets at the east and west, and by low coupled lancets at the end; the windows of the clerestory are trefoils pierced through the wood-work, those of the chancel bay are quatrefoils. Internally there are five bays, formed by clustered wooden columns composed of four semicircular shafts with Early English capitals; from these spring smaller shafts supporting the principals of the nave, the wooden arcade, and the principals of the aisle roof. The spandrels are filled with plain boarding—those in the chancel are panelled; the arches are strengthened by struts, the intervening spaces being filled with open tracery. The easternmost bay forms a spacious chancel. A high screen divides the organ-chamber on the north side, and a similarly enclosed screen the vestry on the south side from the chancel. The altar, which is very massive, has six circular columns, with foliated capitals. The church will seat 350 persons. The plans were prepared by Mr. R. P. Pullan, who had designed a smaller church for the same site in 1874, and have been excellently carried out by Mr. Ragatz, of Zurich. H.R.H. the Princess Christian, who has taken the greatest interest in the progress of the church, presented a handsome frontal, executed by the ladies of the South Kensington School of Needlework under Mr. Pullan's superintendence. The Princess also carried out the greater part of the floral decorations for the day's consecration. Mr. and Mrs. Bancroft were liberal contributors to the edifice; they gave the central light of the eastern triplet, and the bell. The Rev. J. W. Ayre presented the jewelled cross. The Rev. J. Nixon gave an ornamental fald-stool.

## NEW BUILDINGS.

**Bodmin.**—The foundation-stone has lately been laid of an extension of the Cornwall Lunatic Asylum at Bodmin. The new building will cost about 12,000*l*., the contract being 11,600*l*.; the excavating and preliminary works having been done. Mr. Marshall, of Plymouth, is the contractor; Mr. Hine, the architect; and Mr. W. J. Jenkin, Bodmin, clerk of the works.

**Bideford.**—The new Bridge Buildings, at the western end of Bideford Longbridge, have been opened. Facing the river are three storeys, the first for the Public Free Library and Reading-room, the second comprising the new Bridge Chamber, while the upper storey is intended for the use of science and art classes. That portion of the building overlooking Allhalland Street is divided into suites of offices suitable for professional men. Provision has also been made for care-taker, bridge officials, &c. The stone used for the walls is from a local quarry; the window jambs, mullions, and ornamental portions being of Ham Hill stone. The buildings have been erected at a cost of about 4,000*l*., the architect being Mr. Bryden, and the contractor Mr. R. T. Hookway, Bideford.

**Newcastle-on-Tyne.**—The Public Free Library in New Bridge Street has been opened. The building is three storeyed, and its length from east to west 167 feet. The building was designed by Mr. Alfred Fowler. It may be remembered that an unsuccessful endeavour was made to preserve the Carlol Tower when the erection of the library was proposed.

**Elland.**—Plans have been prepared for the erection of banking premises for the Lancashire and Yorkshire Bank (Limited) by Messrs. Utley & Gray, architects, Halifax. On the ground floor there will be the bank, 23 feet by 21, also private-room, strong-room, cloak-rooms, dining-room, kitchen, scullery, &c. Upstairs there will be drawing-room, library, bed-rooms, bath-room, &c.; and over these will be additional bed and store rooms. The building is to be Gothic in style; the walls of stone, and the front of Ringby ashlar, with Southowram wallstones, clean cut. The interior woodwork is to be of pitch pine. The contractors are:—Masons, Emanuel Riley & Son, Rishworth; joiner, Joseph Wilson, Elland; slater, Wm. Robinson, Sowerby Bridge; plumber, Joseph Aspinall, Elland; painters, Robinson & Sons, Greetland; and carvers, Rogers & Roberts, Holywell Green.

## SCHOOL BUILDINGS.

**Bloxwich.**—A new school at Elmore Green has been opened. The building forms one wing of a block which it is proposed to build when needed. The building has been erected at a cost of 1,995*l*., and will accommodate 300 children, the total accommodation of the complete building being for 800. Mr. S. Loxton, of Walsall, is the architect, and Mr. A. Lynex, also of Walsall, the builder.

**Wyke.**—The foundation-stone of a Congregational school chapel has been laid at Norwood Green. The inside measurements will be 54 feet by 30 feet, accommodation being provided for 400 persons. Mr. R. F. Rogerson, of Brighouse, is the architect.

**Cheadle Hulme.**—The additional school buildings, which have been erected in commemoration of the twenty-fifth anniversary of the foundation of the Manchester Warehousemen and Clerks' Orphan Schools, Cheadle Hulme, have been opened. The new buildings are a little to the left of the original building. The design is Gothic in character, and in keeping with the architecture of the present institution. The elevations are of red stock brick-work, with stone dressings and terra-cotta strings and label moulds. The accommodation on the ground floor consists of a large central schoolroom with a classroom at each end, divided from the central school by movable partitions. On the first floor is placed a large central schoolroom for the juniors, of the same size as the one below, and at each end are placed the chemical laboratory with apparatus-room adjoining, for the boys on the one side, and a large sewing-room for the girls on the other. The work has been carried out by Messrs. R. Neill & Sons, Manchester, from the designs of Messrs. W. & G. Higginbottom, Manchester. The total cost has been about 4,000*l*.

**Heworth.**—Three groups of schools are at present in course of completion to meet the deficiency of school-accommodation in the Heworth School Board district. Two have been completed, and were opened on Monday last, whilst the third will be opened shortly. The Felling schools are arranged to accommodate 725 children. The building is in two storeys, and the characteristic features of the interior are the large number of classrooms, provided with the facilities that exist for easy and direct supervision by the heads of departments, and the means that are provided to enable all the children to approach and leave their several classrooms without noise or disturbance to the rest of the scholars. Mr. G. Waddell, of Edinburgh, was the contractor. Messrs. Oliver & Leeson, of Newcastle-on-Tyne, are the architects for the three groups of schools.



## GENERAL.

**Mr. Henry Dyer** has resigned the office of Principal of the Imperial College of Engineering at Tokio, which he held during nine years. He has been succeeded by Dr. Divers, but his chair of Engineering remains vacant.

**The Hon. J. C. Dundas, M.P.**, Lord-Lieutenant of the county of Orkney and Shetland, has intimated his intention of presenting one of the stained-glass windows in the front of the Lerwick Town Hall. The subjects that have been selected are King Harold Hardrada of Norway and Earl Magnus, to whom the cathedral of Kirkwall is dedicated.

**Mr. J. Dixon**, of London, has obtained the contract for the rebuilding of the Solway Viaduct which was destroyed about eighteen months ago. The contract price is about 30,000*l*.

**The Duke of Westminster** has offered to bear the expense of the rebuilding of the tower of St. John's Church, Chester, which fell last year, as well as providing for the cost of new schools for the parish.

**Mr. Edgar Bruce**, it is stated, is about to build a theatre at the top of the Haymarket.

**Mr. Clement John Heaton** (son of the late Mr. Clement Heaton) has become a partner in the firm of Messrs. Heaton, Butler & Bayne, the well-known artists in stained glass and other decoration.

**The Bishop of St. David's** has reopened the parish church of Llandawke, a Norman building of great antiquity, which for years has been in a most ruinous and dangerous condition. The parish is only 620 acres in extent, while the population all told is only twenty-one.

**The Portrait of Mr. Galbraith**, ex-Lord Provost of Glasgow, painted by Mr. Norman Macbeth, R.S.A., has been presented to the authorities of that city for the recently-formed Lord Provosts' Gallery.

**Mr. C. L. Clare** has presented to the Peel Park Museum, at Salford, five cases containing impressions of all the Great Seals of England, from the time of Edward the Confessor up to the present time, and also a case containing 187 impressions of university, monastic, and county seals.

**The Parish of Perivale**, near Ealing, contains only five houses and thirty-four inhabitants, being the smallest parish in the diocese of London and one of the smallest in England.

**The Southwell Bishopric Fund** has reached 35,296*l*. Of this sum Lincolnshire has contributed 8,707*l*.; Nottinghamshire, 5,217*l*.; Staffordshire, 4,729*l*.; Derbyshire, 3,280*l*.; and Shropshire, 4,865*l*. It is estimated the general fund will yield 2,800*l*. and that the general committee will grant 5,000*l*.

**The Local Board of Eastbourne** having entered into a contract for the lighting of the principal thoroughfares by electricity, the sea-front was on Saturday illuminated by the new light.

**The Kirkcaldy Fine Art Association** opened their eleventh annual exhibition on Monday. Out of 1,175 paintings, room has been found for 958. A larger number of water-colours than usual is exhibited, and among them specimens of Sir John Gilbert's and Birket Foster's works. The Association has up to the present time been the means of disposing of works of art to the value of 10,000*l*.

**The Ancient Church of St. Mary, Hoo**, near Rochester, is being restored under the direction of Mr. E. W. Stephens, F.R.I.B.A., of Maidstone.

**A Fine Art Exhibition** in connection with the School of Art, Hensburgh, was opened on Saturday. Among the exhibits is Gérôme's picture of the *Prisoner of the Nile*, from Skelmorlie Castle.

**The Canadian Pacific Railway** is now laid for a distance of 350 miles from Winnipeg. Telegraphic construction is being pushed on concurrently with the work of the railway. Two hundred miles of rail have been constructed during the last three months.

**The Roman Villa at Brading**, being now entirely in possession of Lady Oglander, further explorations of the remains are to be conducted by Messrs. Hilton & Price, with the assistance of Captain Thorpe.

**A Syndicate of London Capitalists** have contracted with the Canton of Geneva for the construction of an electric railway, on the Edison system, between Geneva and Fernex, and Fernex and St. Julien, in the Savoy, a distance of about twenty kilometres.

**The Newcastle Society of Antiquaries** have formed a committee for the purpose of sketching and photographing buildings of interest erected in Newcastle and Gateshead previous to the year 1700.

**The Corner-stone** of a new wing to the Albert Memorial Museum at Exeter, was laid last week. Messrs. Stephens & Bastow, of Bristol, are the contractors for the work; Messrs. Hayward & Sons being the architects.

**The Worcestershire Exhibition** has cost about 7,000*l*. The receipts up to August 26 amounted to 4,500*l*., leaving a balance of 2,500*l*. to be made up.

**A Statue of the late Mr. Macdonald, M.P.**, is to be placed in the Miners' Hall, Durham.

**The Liverpool Town Council** on Wednesday approved of a motion of Sir James Picton's, that a sum of 2,000*l*. should be placed at disposal for works of art during the current year, the money itself being earned by the autumn exhibition. The purchase of the following pictures has been agreed to: *A Street in Brittany*, by Stanhope A. Forbes; and *On the Moray Firth*, by John Fraser.

**The Derby Art Gallery** is so far completed that it is intended to open it next month or early in November.

**Two of the Bronze Panels** for the base of the Temple Bar Memorial have been fixed during the week. They have been executed by Messrs. Mabey, of Westminster.

**Brentor Bridge**, which crosses the Great Western Railway near Lidford, had been condemned for traffic, and was taken down on Sunday and cleared away without delaying the railway service. An iron girder bridge will take its place.

**The Kidderminster Board of Guardians** have received five sets of plans sent in for alteration and extension of the work-house.

**The Bridge of Weir Orphan Homes** have been completed by the dedication on Tuesday of the new invalid home. Mr. Quarrier, who has spent over 26,000*l*. on the building, intends to transplant the Emigration Homes at Govan Road, Glasgow, to Bridge of Weir, which will entail an additional expenditure of 12,000*l*.

**Sir Charles Freahe** has placed a portion of the Town Hall Buildings, Twickenham, at the disposal of the Free Library Council for the purposes of a library until the Council are in a position to erect a permanent structure. The hall was erected a few years ago by Sir Charles Freahe for the benefit of the townspeople of Twickenham.

**The Electric Light** was successfully supplied by Mr. Edison on Sunday night, from a single source, to the houses in a district of New York occupying a square mile.

**The Stockton-on-Tees Corporation** on Tuesday decided that the arched bridge across the Tees should be carried out as originally designed.

**Ashturton Church Restoration** will be commenced early next spring by Mr. Abley of Salisbury, under the direction of the architect, Mr. A. E. Street, M.A. Mr. Abley, whose tender for the work was accepted, declined to be bound by his tender, as the committee required the work to be carried out in sections; the committee have, however, now withdrawn this condition.

**The Philharmonic Theatre**, Islington, was destroyed by fire on Wednesday morning.

**The Bengal Ironworks** have been purchased by the Indian Government for the sum of 430,761 rs., and the Viceroy now announces that his Council will be ready to transfer them for that sum, together with any further indispensable outlay, to any parties who may establish satisfactorily that they are in possession of sufficient skill and resources, and who are prepared to carry on the manufacture of iron and steel upon a scale commensurate with the probable needs of that portion of British India which is within a reasonable distance of the works.

**The Liverpool Art Exhibition.**—Over 1,500 persons attended the "private view" of the collection of pictures and sculpture in this season's autumn exhibition, held in the Walker Art Gallery, under the auspices of the Liverpool Corporation, and 91 pictures were sold, realising 1,328*l*. The collection comprises 826 oil-paintings, 741 water-colour drawings, and 38 pieces of sculpture. Sir F. Leighton's *Phryne* occupies a prominent place in one of the rooms.

**The Late Louis Rubio.**—The *Times* Geneva correspondent writes:—"Louis Rubio, in his day a painter of high repute, though born at Rome of a Spanish father and an Italian mother, was a Genevan by adoption, and executed here some of his principal works. After studying his art for some time in the city of his birth, he went to Paris and completed his artistic education in the studio of the celebrated Léon Cogniet, who became one of his fastest friends. He next travelled in Italy and France, and finally settled at Geneva, where he remained until his removal, a few years ago, to Florence, where he died on August 2 at the age of 82. His works are to be found all over Europe, as well in public galleries as in private collections. Among the principal of them are *Priam at the feet of Achilles*, *The Samaritan*, and *The Marriage of Salvator Rosa*, all of which are at the Grand Trianon. His *Marie Stuart* is at the Rouen Museum; his *Siege of Brussels* at Versailles; and all the decorations, in the Byzantine style, of the Russian Chapel at Paris were executed by this artist. Two pictures, which he painted at Geneva, *Van Dyck quitting Patellier de Rubens*, and *Le Tasse lisant sa Jérusalem délivrée devant la Princesse Eléonore d'Este*, have been made widely known through the medium of engravings."



# The Architect.

## ARCHITECTURAL FRENZY IN THE NEW WORLD.



ON this side of the Atlantic the miscellaneous Anglo-Saxon writer of our latter part of the nineteenth century has been pleased from time to time to run amuck upon architectural questions in a most peculiar way; not at all in an unintellectual or inartistic way, but in a way which might be called, if we were so minded, by any one of

half-a-dozen handy phrases suggestive of lightheadedness. Fun has of course been the principal weapon in his hand; and sometimes very good fun it has been of its kind, hitting hard and straight at the mark; but inasmuch as the mark has been quite as often a delusion as not, and still oftener at least a whimsey, it cannot be said that the practical result has been worthy of the expenditure of so large an amount of wit. Architects as a rule do not trouble themselves to read with any marked attention such disquisitions concerning their business. The public at large also, who are the employers of the architects, are still less disposed to flounder through the obscurities of the argument. Practical men perform their practical work in the old way; and, from the brilliant transcendentalism of Mr. RUSKIN to the prosaic infatuation of the inventor of the "Inspired Mason" in the *Quarterly*, the assault has entirely failed, and the design of our buildings is very much what it would have been if Grub Street had left it alone.

It need scarcely be observed, however, that the fever of hypercriticism is a contagious disease; and accordingly no one need be surprised to find the *North American Review* publishing a lengthy and excited article in which an American writer denounces American architecture in the same style of rhetoric with which we are familiar in England. The writer is Mr. CLARENCE COOK, and such of our readers as have returned from their holiday in a sufficiently pleasant humour may have enjoyed not a little the racy extract which we reprinted last week from this gentleman's essay. Those who have not yet read it we recommend to do so without further loss of time, for the lesson it teaches is indeed instructive as well as amusing.

It will thus be seen that in the United States, as in England, the architect is easily proved to be a sad blockhead, and his work very sorry stuff. The leading point in the American reviewer's argument is, as many might suppose, although many might not, a reference to the superior genius of antiquity. This artifice is pretty much exhausted in England; but it is new in America, and very probably may prove highly attractive there. On this side the ocean, not only have we ceased to hark back to Greece and Rome, or even to new-born Italy, but our own stately monks and saintly freemasons of the Middle Ages—if stately and saintly they really were—we have at length in some degree consigned to the same limbo of exhausted fashion; and what we have come to fancy now more than all else is the higgledy-piggledy of the STUARTS. Now if it happens that there is Stuart architecture of as veritable a kind on the other side as there is on this, it is plain without explanation that such art must happily combine in that part of the world the two great critical virtues of antiquity and fashion. That is to say, when we in England go back to the invasion of Norman WILLIAM and his rowdy followers, the corresponding reference in America is to the grim and sober-sided people who "came over in the *Mayflower*," seeking refuge, it will be remembered, in the wilderness from the theological discipline of King CHARLES of jovial but disreputable memory; and so we may expect to find the architecture of the Pilgrim Fathers to be authentic "Queen Anne." Not only so, but when the old Hollanders built New Amsterdam—the city which some of our readers may require to be told is now called New York—it must be equally true that their architectural style would be of very much the same type. Accordingly, when Mr. CLARENCE COOK conceives the happy thought of appealing to "the handsome houses in Gloucester, Hingham, Cambridge, and other Massachusetts towns, the houses that made old New York so

dignified a city, and those that still give to little Newport an air of consequence," he is not only in the fairest possible manner putting KNICKERBOCKER in the place of WILLIAM THE CONQUEROR, but he is at the same time accepting for Queen Anne here Queen Anne there—a proceeding which is doubly convenient, interesting, and authoritative. But the Transatlantic critic is far too acute to stop here, as an Englishman might do—at least, any other Englishman than such a one as the discoverer of the Inspired Mason. Those delightful examples of antique art, he says, "were the work of simple 'builders,' who knew their trade and never cared to give themselves a finer name." Very likely they were; and what then? The conclusion is obvious. "Where architects abound," he continues, "the art of building always deteriorates. Did architects design the houses of Venice? Architects may have designed the bad ones, but never the good ones. As soon as architects got themselves fairly established in Venice, her shabby days began." With all respect for the humour of Mr. CLARENCE COOK, we are bound to suggest that he is here drawing upon his imagination for his facts. If he merely intends to assert that the work of the Renaissance in Venice is inferior to the pre-Raphaelite work, that is a matter of opinion which for a good many years has been held to be beyond the range of profitable argument, people of different artistic proclivities being entitled so far to agree, or disagree, to differ. But our critic goes on to illustrate his meaning a little further: "Consider the cottages of England, the chalets of Switzerland; is it not evident that they are the spontaneous outgrowth of a general good taste" and so on? Consider, of course, the lilies of the field, how they grow; they toil not, neither do they spin; yet SOLOMON in all his glory is not arrayed like one of these. "Every old church in England looks built by the same hands that built the old houses that nestle about it." A pretty fancy, we grant, especially for an American; a tender thought, by no means to be discouraged or disparaged; or we might be obliged to urge the reflection that threescore years and ten would have to be repeated in some instances a good many times before the same hands that had begun their work upon a village church of the twelfth or thirteenth, or even the fifteenth century, could have finished it upon the poor slap-dashed dwellings that are rickety and old in the eighteen hundred and eighties, after an existence of scarcely a century and a half. The identification is in truth no more than a recognition of the fact that distance still lends enchantment to the view; once beyond the limits of substantial common sense, and it matters not whether the quaintness of such old houses be that of a hundred years or that of a thousand. But whether this is sound criticism, or even intelligent archaeology, is quite another question. "It is to architects," continues the new apostle at any rate, "that we owe all the ugly building that offends us;" and this is the proposition which he wishes to demonstrate by such reasoning. It is true that it could scarcely be demonstrated by any other.

After our own manner, but with a freedom of personal animadversion which no Englishman could hope to emulate, and which is therefore all the more refreshing, Mr. CLARENCE COOK, having thus laid down the law, proceeds to exemplify its operation by describing the actual specimens of architectural art which claim to be most popular in his great country. "A builder," he observes, more in sorrow, but a good deal in anger, "must call himself an architect before he can be employed in any important work to-day. The man—I forget his name—" (what a pity he forgets his name!) "who built Mr. A. T. STEWART's house and iron shop, and many a structure beside, was called an architect." Architects also—with forgotten names—have built certain churches about Boston; "and another architect built the church in that Back Bay quarter, dedicated, we suppose, to some female saint, since it has for emblem on the top the completest Saratoga trunk"—and so on; a Saratoga trunk being, it is to be supposed, the very large travelling box, and nothing else, in which an American fine lady takes her dresses to the famous springs. Still another architect has built "the Art Museum, so finikin fine," which is adorned with "heads of great men looking out of portholes in the most shipwrecked fashion, a senseless treatment borrowed from that overdone Pavian Certosa." "Borrowing, borrowing everywhere!" is the Carlylese cry of the critic, "an original motive almost impossible to find;" and now there follows at last this suggestive reflection:—"For the people at large have no ideas on the subject; the 'builders' have been snubbed into taking a back seat and keeping it; and



in architecture, as in all our fine arts, notably in the art of painting, the field has fallen into the possession of a *set of clever, accomplished, but over-cultivated young men*, who have come back from French and English studios, offices, and pedestrian trips, with a plenty of 'material' in their sketch-books," which, in short, although all very well in its way, is of no use in America. But why of no use in America?

Mr. CLARENCE COOK, whether in affectation or in reality, seems to be only playing the part, after all, of one of those growling patriots who are to be met with in every land, and whose simple and easy function it is to cry up the imaginary excellence of the "good old times." Fancy this old-maidish whim having at length got so far as to insist upon the worship of such an idol as the architecture of the godly men who "came over in the *Mayflower*!" Fancy the churches of all America tied down for ever to the pattern of the conventicles in which COTTON MATHER expounded the mysteries of witchcraft! We venture to express the hope that American architects will pay no attention to Mr. CLARENCE COOK; that the clever and accomplished young men who have gone home from French studios and English offices, with "a plenty of material," will by no means consent to imitate the barren work of primitive Yankee builders, but go on their way rejoicing in the fact that they are doing good work for their country, and better and better every day.

### WATTEAU.

THE poet of the eighteenth century is WATTEAU, writes EDMOND DE GONCOURT, whose singular good fortune it has been to have discovered the original manuscript of the Comte DE CAYLUS' biography of that artist among old papers bought by the pound of a "bouquiniste" in the Arcade Colbert, Paris. The manuscript is bound in calf, and bears the lilies of France on the back and side pieces. The title stamped thereon is "Conférences et détails d'Administration de l'Académie Royale de peinture et de sculpture : MDCCXLVIII." The first document the volume contains is a report of the proceedings of the Academy during the year 1748; next are speeches by CUYPEL, painter in ordinary to the King, and biographer of several of the Academicians, as, for example, of EUSTACHE LESUEUR, LEMOYNE the sculptor, and lastly of WATTEAU, by the Comte DE CAYLUS, each countersigned and certified by LÉPICIE, perpetual secretary to the Academy. The discovery of this lost volume was an event in the annals of French art, for MM. DUSSIEUX and SOUHÉ, who edited the memoirs of all the members of the Academy of Painting and Sculpture, were compelled to omit that of WATTEAU, in consequence of the volume discovered by M. DE GONCOURT having been stolen from the archives of the Academy.

WATTEAU created a style. He has had a host of imitators, but not a single rival. Essentially a poet, he threw on canvas the enchanted visions of his fervid imagination, thus creating an ideal world, all caprice, fancy, and poetry, as did SHAKESPEARE when he wrote "Midsummer Night's Dream." WATTEAU revived that peculiar and refined elegance in style which had been lost in the heavy magnificence of LOUIS XIV.'s reign. The grace, of which WATTEAU's brush is the exponent, was not copied from the antique. It is something yet more subtle, to be felt rather than defined in the pose of a figure, the profile of a face, the coquetry of an attitude, the folds of a woman's skirt. This poetic grace WATTEAU stereotyped on canvas as effectually as did the melted lava the breast of DIOMEDE's wife in the ashes of Pompeii. But not alone in the delineation of the human form does the pencil of WATTEAU express grace. His landscapes, luminous in the lovely light of a summer's day, are poems on canvas. The woods which form the background of his pictures have a freshness of verdure not one of WATTEAU's school discovered the secret of reproducing. The statues beneath their shadow insensibly lead the eye to one of those distances, mysteries of receding landscape, lost in the haze of a luminous glow, blending on the horizon with all the glory of a summer sky. In the foreground how graceful are the groups of revellers: a Harlequin, Pierrot, a Gilles, and a Scapin, *e tutti quanti*—some masked, some unmasked—surround a Columbine, the rose tint of whose *sacque* catches a sunbeam which plays on the sheen of the satin, showing every fold of its cunningly-devised drapery; she flirts her fan with a grace queens envy; musicians, in the fantastic garb of *les comédiens du roy*, accompany on guitar and

tambourine Gilles and Columbine as they sing their eternal refrain, "Enfants d'une bouche vermeille."

ANTOINE WATTEAU was the son of a poor tiler of the town of Valenciennes. The registry of his birth, spelt in defiance of rule or custom, informs us that the event occurred on October 10, 1684. The father of the lad, born within two years of Madame DE SEVIGNÉ's death, was a man of violent temper. It was his ambition that his boy should follow his trade, which had been that of his forefathers, but the lad's vocation was strangely marked. After a long struggle against ANTOINE's desire to study art, the tiler consented to his entering the *atelier* of JACQUES ALBERT GÉRIN, the painter of civic festivals and other ceremonies of the town of Valenciennes, a great man in his own city, but utterly incapable of instructing a future WATTEAU. Escaping sometimes from GÉRIN's studio, the boy would stand at the corner of the "place" on a market-day, and sketch the comic scenes which caught his eye. These he sold for a few pence to the mountebanks and jugglers who frequented country towns. The tiler, however, finding that ANTOINE's studies under GÉRIN contributed naught to the housekeeping, refused to continue the small stipend required for his maintenance, although he was well off for his class, possessing a house of his own, which he let, and, moreover, inhabiting one he built himself within the enclosure belonging to the Abbey of St. John. The lad, rather than return to his home, resolved to start in life on his own account, and walked from Valenciennes to Paris, without a change of clothes or a single sou in his pocket. He sold drawings by the way for bread, and reached the great city, weary and footsore, towards the end of 1702. He was therefore eighteen. *Peu savant* and penniless, as his chronicler remarks, he wandered on to the Pont-Neuf, on each side of which bridge in those days sellers of religious images and Holy Families had stalls. To one of these, MÉTAYER by name, he showed a sketch, who instantly engaged him as one of his pupils—or rather workmen—for the man's house was a manufactory rather than a studio. Each poor fellow had his appointed task. One painted skies, a second heads, a third draperies, while to the most expert was entrusted the putting in of the high lights. WATTEAU speedily became a favourite with his employer, inasmuch as he proved capable of all of these functions. The drawings were turned out at so much the dozen. WATTEAU worked by the day. On one occasion the old wife of his employer, who had carefully put the original of the drawing ANTOINE was to make a copy of under lock and key, not seeing the lad at his usual place at eight o'clock, received him with a volley of abuse when he put in an appearance at twelve. ANTOINE, with a simple air, drew a finished copy from his pocket, executed from memory, of GÉRARD DOW's old woman reading, a subject much in vogue at the time, and told the irate beldame he only wanted to see the original in order to put the spectacles on the old woman's nose, which he had forgotten. Alluding to those days in later life, WATTEAU said: "My Saint Nicolases were my chief successes; I knew my Saint Nicolas by heart, and did without the original." For this uncongenial work MÉTAYER gave the lad half-a-crown a week; it is true that for charity sake he sometimes gave him a little soup. The hours WATTEAU could snatch from sleep he spent in the gardens of the Luxembourg, in order to sketch the fine old trees there. He would draw the same group at different hours, in order to study the effect of light on the foliage. In many of his pictures one can trace a reminiscence of that stately plaisance, which in his time was the residence of some of the Royal Family. By a lucky chance GILLOT saw one of the sketches thus taken in the early hours of a summer morning. At once discerning genius in the style, he sought out the lad, and invited him to study in his *atelier* and live in his house. GILLOT had been recently admitted to the Academy as Associate. He had begun his career as a decorative artist, but had abandoned that part of his profession for subjects drawn from Italian comedy, many of which have been preserved in the Louvre. This invitation, eagerly accepted, proved the turning-point of WATTEAU's life. GILLOT's style—so graceful and exquisite in poetic fancy, and often comic—coincided with the natural bent of his mind. A phase of art of which the son of the Valenciennes tiler had no conception was revealed to him, and which undoubtedly influenced his future compositions. Again and again we find the Italian comedians forming the subject of his pictures. He painted their flight when ordered to quit Paris at the instigation of the severe MAINTENON; he



painted their amusements, their serenades by torchlight, their *vacances* in the country, &c. On hundreds of panels preserved in the old châteaux of France we find a Columbine and Mezzetin disporting themselves by the banks of some pool, frightening the winged denizens of a farmyard by their antics. Not only in the productions of his brush but in the nature of GILLOT there was a strange affinity with that of the young student, an affinity which, by some mysterious fatality, proved the cause of their separation. Master and pupil quarrelled. Not only did WATTEAU quit his new home, but he induced his fellow-pupil LANCRET to leave GILLOT's *atelier*. He said later on to GERSAINT the picture-dealer, "I advised LANCRET to form his style by the study of Nature, which he accordingly did." If LANCRET was not, he has been supposed to be a pupil of WATTEAU; when the latter had attained notoriety LANCRET undoubtedly studied his manner and sought his counsel. WATTEAU was never induced to reveal the cause of his abrupt departure from GILLOT's house, and even resented any attempt made by his friends to ascertain the cause of the rupture. To the end of his life he praised GILLOT's works, and acknowledged the service his teaching had rendered him. It has been surmised that GILLOT became jealous of a pupil he foresaw would outstrip him in genius. Certain it is that GILLOT never touched brush or palette, and devoted the remainder of his days to the art of etching, in which he excelled, as is proved by his illustrations of LA MOTTE's Fables.

CLAUDE AUDRAN, who occupied the responsible position of guardian at the palace of the Luxembourg, hospitably offered WATTEAU a home after the quarrel which deprived him of GILLOT's friendship. CLAUDE was a man of intuitive as well as acquired taste. If not as gifted as those of his family who had been admitted to the Academy, he was still no mean artist himself, and had specially made decoration his study, having formed his taste on RAPHAEL's loggie at the Vatican and PRIMATICCIO's work at Fontainebleau. To CLAUDE AUDRAN was due the revival of the arabesque style adorned by figures, animals, and birds. AUDRAN formed WATTEAU's style in decorative art. It was while with him that WATTEAU acquired the inimitable lightness of touch and delicacy of execution so remarkable in the panels on a white ground, belonging to M. DE LA BÉRAUDIÈRE, exhibited at the Arts Décoratifs in 1880. These were but specimens of many carefully preserved in châteaux belonging to the old French nobility. The Duc DE MAERNAIS possesses a series on a gold ground, wherein butterflies, birds, and flowers are drawn with an almost aerial delicacy. AUDRAN had decorated the Menagerie of Versailles, by royal command. His work on the ceilings of several rooms in the palace of Meudon, destroyed by fire during the Franco-German war, proved how capable he was to form the style of the rising genius. While residing in the palace of the Luxembourg WATTEAU made RUBENS his special study. The series of pictures bearing on the life of Queen MARIE DE MEDICI, now in the Louvre, then decorated the palace for which they were painted.

His first picture of importance was painted by WATTEAU at this period and shown to AUDRAN, who recognised the touch of genius in the composition, which was afterwards engraved by COCHIN; but AUDRAN, jealous of the superior merit of his pupil, told him that he had better keep to ornament, as the work was utterly without merit. At this time young WATTEAU wished to return for a brief period to visit his family at Valenciennes, and sold it the painting for 60 fr., with which sum he accomplished his journey, which was a mere pretext for breaking with AUDRAN, from whom he had learnt all that that excellent man could teach. Desirous of studying the ancient masters in Italy, he wished to compete for the Academy prize and be sent to Rome at the expense of the society. He accordingly deposited two paintings—subsequently purchased by LORANGÈRE—in the *salle* of the exhibition on the day when the examination took place, and anxiously awaited the result. M. DE LA FOSSE passing by, struck by their vigorous tone and harmony of composition, sent for young WATTEAU. Timid and somewhat awkward in manner, he appeared almost ashamed of his own talent, but summoned courage to ask M. DE LA FOSSE to endeavour to induce the Academy to send him to Rome. "My friend," said M. DE LA FOSSE, "you are not aware of the talent you are endowed with; take my word for it, you know far more than many among ourselves. We of the Academy will esteem it an honour to receive you. Take the

necessary steps; we shall consider you as one of us." WATTEAU bowed, paid the usual visit to each Academician, and was received as Associate. The legal document is extant, and in it we find that ANTOINE WATTEAU took the oath in presence of CUYPEL, "Premier peintre du Roy et de Monseigneur le Duc D'ORLÉANS."

WATTEAU, like BYRON, awoke next morning to find himself famous. He was overwhelmed by orders. Perhaps the art patron who had the most important influence on his future career was the celebrated financier and banker, CROZAT, whose hotel covered the space now occupied from the Rue de Choiseul to the Rue de Richelieu by the Italian Opera-house. CROZAT's granddaughter married the Prime Minister of LOUIS XV., and inherited, besides his enormous fortune, his picture gallery, subsequently known as the Choiseul Gallery. M. CROZAT not only devoted fabulous sums to the collection of the finest works of the old masters, but invited artists from all parts of Europe to decorate his magnificent residence. Thus it came to pass that ROSALBA CARRERA, the Venetian painter, executed her finest portraits during the two years she was the honoured guest of M. CROZAT, as was also her sister and brother-in-law. M. CROZAT was not only the MÆCENAS of the day; he enjoyed the society of artists, and invited WATTEAU to take up his abode at his princely hotel, an invitation WATTEAU accepted more on account of the art treasures he would have the opportunity of studying than because of the luxurious table kept up by his munificent patron. Most especially was M. CROZAT's collection rich in original drawings of the early Italian masters. GIACOMO BASSANO's afforded WATTEAU great delight, as also those of VANDYCK and RUBENS, many of which may now be seen in the "Galerie de Dessin" at the Louvre. WATTEAU made the trees and backgrounds of TITIAN's and CAMPAGNOLO's works his special study: the grandeur of composition of the paintings of the old masters filled him with admiration, but not with any desire to follow in their track. It was while the guest of M. CROZAT that WATTEAU painted *Les Quatre Saisons* for the decoration of his dining-room. M. DE GONCOURT is the fortunate possessor of the original drawings of the figures of Spring and Autumn. It was at the Hôtel Crozat he formed the friendship of the Comte DE CAYLUS, M. DE JULLIENNE, M. HENIN, who to the end of his brief career proved his steady friends and patrons. So captivated were DE CAYLUS and HENIN by his genius, that they procured from Italy copies of the landscapes of the most celebrated old masters, in order that he should form an idea of their style. "These," remarks the Comte, "we had executed as rapidly as possible, and roughly finished; we also sent to Holland for similar copies of the chief landscape painters of the Dutch school, so that he should be enabled to judge of the general effect of these works. Our orders were rapidly executed, for WATTEAU's nature was nervous and excitable; once he formed a wish, he was impatient to accomplish it. He was delighted by our effort to render him a service, and thoroughly appreciated the result."

A portrait of WATTEAU, executed at this period, was sold in March 1875 at the DE VIGNIÈRES auction. In it he is seated at a table, and holds a compass. His wig is short and curled, his coat is furred. His expression has something naïf, and perhaps a little bourgeois. His portrait by BOUCHER, taken a few years later, is more indicative of his nervous and somewhat cantankerous nature. WATTEAU was early in life attacked by the disease which carried him off at so early an age. BOUCHER's portrait conveys the idea of a thin man emaciated by suffering; his expression is restless and dissatisfied. The same expression may be noticed in OPPENORT's portrait, engraved in a medallion form, surrounded by genii bearing the attributes of painting, and surmounted by an eagle holding the trumpet of Fame in his talons. WATTEAU was careless in his attire and slovenly in the arrangements of his painting-room. He rarely cleaned his palette, and even neglected for days to renew the colours on it. His oil-pot, of which he made perhaps too much use, was full of dust, and gradually became discoloured by all the paints from the brushes he continually dipped into it. In this carelessness WATTEAU differed essentially from GÉRARD Dow for instance, who ground his colours on a piece of looking-glass, which he carefully cleaned before putting them on it, lest the slightest particle of dust should become mixed with them; GÉRARD Dow cleaned his palette himself, not even entrusting this duty to his old retainer. WATTEAU retained the child-



like simplicity of his nature even in the midst of the immense popularity he acquired. On one occasion his hairdresser brought him a new wig. The man took advantage of the occasion, and in reply to the inquiry as to its price, said a few studies would satisfy him. WATTEAU thought he had never had so cheap a wig, and presented the man with two drawings, perhaps the most piquant he had ever done. The Comte DE CAYLUS happening to pay him a visit shortly after the bargain was concluded, found WATTEAU disturbed in mind as to whether he had adequately remunerated the hairdresser.

(To be continued.)

#### ASPECTS OF MR. RUSKIN'S TEACHINGS.\*

AS the name of Mr. RUSKIN's publisher appears on the title-page of the pamphlet which is intended to be an introduction to his works, we may surmise that the compilation has secured his sanction. If so, it suggests another change in Mr. RUSKIN's opinions. Shilling pamphlets filled with the "beauties" of his books would be supposed to be contrary to his theory of authorship and publication. He has before now announced that he did not care for anybody reading his books who grudged him a doctor's fee. Accordingly his tariff is 18s. for plain volumes, and 17. 7s. 6d. for illustrated ones; so that by the addition of commissions the price may correspond with the physician's fee. The fact seems to have been overlooked, in this analogy seeking, that there are multitudes of people who are unable to pay guinea fees, and that skilful doctors are compelled to accept much smaller sums, and very often to receive them in instalments. Mr. RUSKIN's ideal is a fashionable physician, and those who have recourse to him must be rich. He has not aided in the diffusion among the great body of his countrymen, of such knowledge as is to be found in his books. On one occasion he allowed a selection of the passages relating to Gothic architecture to be printed as a fourpenny tract for the benefit of a workmen's society, but under arrangements by which only a few people could be benefited. Mr. RUSKIN is the only English author of note unrepresented among the "cheap editions." While his books are esteemed by men who love uncut copies, and who consider it a kind of profanity to read a book, they are unknown to millions of his Englishmen. The consequence is, that although Mr. RUSKIN has been writing and publishing for nearly forty years, it is found necessary to explain his thought and teachings. It is no wonder that Mr. RUSKIN is humbled when he considers the mystery of life. In one of his early essays he tells us that "it now needs both curious fortune and vigorous effort to give to any, even the greatest, such early positions of eminence and audience as may feed their force with advantage;" those conditions fortunately belonged to him, and what is the result? His books have become "precious," but in a different sense from what was intended; they are regarded as curiosities, which may be placed in a cabinet with old china, the owners having the comfortable assurance that the value of the books is rising, and that they will fetch more than was paid for them.

It would be a public gain if more could be known about the teachings of Mr. RUSKIN, but we fear that little knowledge is to be derived from the pamphlet before us. This defect does not arise from the carelessness or ignorance of the compiler; it is owing rather to the process employed. Distilled books, says BACON, are like common distilled waters, flashy things. That author must be verbose who will bear to be reduced; one might as well attempt to give the essence of a picture or a statue; and Mr. RUSKIN's volumes are too carefully constructed to be exhibited fairly in the compass of a pamphlet. It is only from a volume like the "Selections," which appeared several years ago, that a notion may be obtained of his manner of thinking, but the book, although supposed to be popular, is not to be had without paying five or six times the published price. The task undertaken by Mr. BAILLIE is therefore of surpassing difficulty, for he attempts in about fifty pages to explain what Mr. RUSKIN has said in numerous volumes about Style, Reading, Education, Art, Science, Labour, Commerce, Political Economy, Woman, Ethics, and Religion. But no compressive force could reduce the subjects of the pamphlet to the size of an article.

Mr. BAILLIE, after his introduction, begins with a considera-

tion of Mr. RUSKIN's style, and with good reason, for the success of "Modern Painters" and the "Seven Lamps" and "Stones of Venice," was in a great measure owing to the style in which the thoughts were expressed. In his early days Mr. RUSKIN was not free from rhetorical mannerisms which he must now abhor. Mr. BAILLIE tells us that Mr. RUSKIN has "only one standard for the measure of his utterance," and that his writings will bear the test which he suggests for a good style, as they show choice of the fewest and simplest words that can be found, emphatic and clear utterance, absolute spontaneity, melody, &c. But Mr. RUSKIN's standard now is so different from that which was followed by him thirty years ago as to suggest a great mental revolution. "I have had," he once wrote, "what in many respects I boldly call the misfortune, to set my words sometimes prettily together, not without a foolish vanity in the poor knack that I had of doing so, until I was heavily punished for this pride by finding that many people thought of the words only and cared nothing for their meaning. Happily, therefore, the power of using such pleasant language—if indeed it ever were mine—is passing away from me; and whatever I am now able to say at all I find myself forced to say with great plainness." It would be interesting to ascertain whether Mr. RUSKIN's change of style has been followed by any increase of his influence, or whether he has really succeeded, as he supposes, in compelling in students "a clearness of thought and precision of language which have hitherto been in nowise the virtues or skills of scientific persons." If it be borne in mind that, with all his powers of observation, Mr. RUSKIN has not been able to enrich science by a discovery however humble, and that not one of his attempts in treating of scientific matters is found to be adapted to the requirements of students, the superior virtue and skill which he claims for his own writings are not so evident as he and his disciples imagine. Mr. RUSKIN's latest writings may compare with SWIFT's as examples of "the plain style"; but it would have been better if he eschewed pharisaisms with as much rigour as he has struck out ornaments. What has he done to authorise this assumption of superiority in clearness and precision over such writers as HERSCHELL, LYELL, TYNDALL, HUXLEY, and others?

In the next chapter we are introduced to Mr. RUSKIN's theory of reading, and which may be represented by the one word "accuracy." "You might read," he says, "all the books in the British Museum (if you could live long enough), and remain an utterly illiterate, uneducated person; but if you read ten pages of a good book, letter by letter—that is to say, with real accuracy—you are for evermore in some measure an educated person. The entire difference between education and non-education (as regards the merely intellectual part of it) consists in this accuracy." This chapter is followed by one on education. Men's business in this world, according to Mr. RUSKIN, is (1) to know themselves and the existing state of things with which they have to do; (2) to be happy in themselves and the existing state of things so far as either are marred or mendable; (3) to mend themselves and the existing state of things, so far as either are marred or mendable. In the "Stones of Venice" the formula was differently expressed, and ran as follows:—"It might be matter of dispute what processes have the greatest effect in developing the intellect; but it can hardly be disputed what facts it is most advisable that a man entering into life should accurately know. I believe in brief that he ought to know three things: First, Where he is; Secondly, Where he is going; Thirdly, What he had best do under those circumstances." The defects of English education in 1853, according to Mr. RUSKIN, were the despising or ignoring of Natural History, Religion, and Politics; and he maintained that at least the first elements of those branches of knowledge should be taught to every schoolboy. But the things which he now considers should be imperatively taught are—(a) the laws of health, and the exercises enjoined by them; (b) habits of gentleness and justice; and (c) the calling by which the child is to live. The great leading error of modern times is, according to Mr. RUSKIN, the mistaking erudition for education, and he is no less positive about the limits which should be set to all knowledge. "I pray you very solemnly," he writes, "to put that idea of knowing all things in heaven and earth out of your heads. It is very little that we can know over all the ways of Providence or the laws of existence. But that little is enough, and exactly enough; to strive for more than that little is evil for us."

It would be impossible in four pages to give a notion of

\* John Ruskin: Aspects of his Thoughts and Teachings. By Edmund J. Baillie, Member of the Ruskin Society. London: John Pearce, Orpington: George Allen.



Mr. RUSKIN's principles in art, more especially as he has not been consistent in his utterances. The abstracts given by Mr. BAILLIE will puzzle rather than enlighten the student. Such a passage as the following must be incomprehensible if taken by itself:—"Everything that you can see in the world around you presents itself to your eyes only as an arrangement of patches of different colours variously shaded. The whole technical power of painting depends on our recovery of what may be called the innocence of the eye; that is to say, of a sort of childish perception of these flat stains of colour, merely as such, without consciousness of what they signify, as a blind man would see them if suddenly gifted with sight." It is remarkable that in the pamphlet there is nothing to suggest that Mr. RUSKIN, when writing of art, considered architecture as well as painting. In consequence, the pamphlet becomes suggestive of Mr. RUSKIN's later moods, for he has confessed that the architecture which he one time tried to introduce among us is "inconsistent alike with the reckless luxury, the deforming mechanism, and the squalid misery of modern cities."

MILTON gave the preference to his "Paradise Regained," and Mr. RUSKIN gives the first place in importance to his chapters on political economy, which bear the title of "Unto this Last." But few of his readers will accept this judgment, although no subject can be more important, and not one of Mr. RUSKIN's books is in a better style. It must, we believe, be said that this book did not secure the success that was customary with those bearing the author's name. This did not arise from any defects in the theory, for opinions, however irrational and impracticable, somehow are acceptable in political economy. But the speculation in "Unto this Last" did not coincide with what was affirmed to be the manner of Mr. RUSKIN. It displayed sympathy with living men, and especially with those who toil in order to make other men rich, while the public believed that Mr. RUSKIN could only treat of inanimate things, like paintings and statues, the old tower of Calais church or the hulk of the *Temeraire*, or of flowers, clouds, rocks, &c. If Mr. RUSKIN's other books had been studied with care, the book might have had a different reception; but, as we have said before, Mr. RUSKIN is not a popular author, and the class of people who would probably be his sincerest supporters are too poor to be able to pay guineas for his volumes.

### THE PROPOSED CHAMBER OF DEPUTIES, PARIS.

WHEN the sittings of the French Parliament were transferred from Versailles to Paris, in 1879, the members of the Chamber of Deputies, 537 in number, found themselves very badly accommodated at the Palais Bourbon, where they had to meet in a hall built under Charles X. for 430 deputies only; and when, shortly after, the number of representatives was increased by 20, the inconvenience was aggravated. During the session of 1881-82 a commission appointed to consider the matter reported that it was not possible to alter or improve the present Chamber in the degree required for the service of the deputies, the public, and the press. It was therefore decided to revert to the project prepared in 1879 by M. de Joly, architect to the Chamber, who had made a long preliminary study of the work, and travelled throughout Europe, visiting and examining the various parliament houses, in order to gain experience both from the successes and errors of his predecessors in the same line. He was accordingly invited, by a vote of the Chamber on March 2 last, to prepare complete and detailed plans for a new Chamber, &c., to be erected within the precincts of the Palais Bourbon. This project, which contains twelve sheets of drawings, an approximate estimate, explanatory notes, &c., is now ready, and on view to the public in one of the rooms of the palace.

The new building is to be erected in the present Cour d'Honneur of the Palais, facing the Grand Square. The main façade, consisting of a centre block and two wings set back, will be about on a line with the buildings that occupy the centre of the Grand Cour, and have before it a space 37½ mètres long by 54 mètres broad; while the columned peristyle fronting the square is to be removed, and replaced by iron railings. The height of the new buildings will not exceed 20 mètres, or 7 mètres less than the greatest height of the existing Palace buildings. The entrance for deputies, senators, and members of the press will continue to be on the quay side, but the public will, under the new arrangement have to go round by the Place du Palais Bourbon, thus creating a diversion the need of which has long been felt.

As regards the Chamber itself, M. de Joly has informed us that the ideal he set before him was a hall where the deputies, press,

public, officers and servitors of the legislature, could move about, be seated, see, hear, and breathe at their ease. The arrangements made to this end may be summarised as follows:—

*For Seeing and Hearing.*—The shape of the hall can best be described as the section of an egg; the contour being an elliptical curve, and the base also slightly curved instead of straight. In this way all the seats will be, in a sense, facing and at right angles to the tribune, so that deputies will not have to change their natural position in order to see the orator; the distance of the latter from the farthest of the seats directly facing him is 21 mètres, and from those on his extreme right or left only 11.50 mètres; finally, the tribune is at such an elevation that the speaker will dominate the highest row of seats, and the hall being entirely free from projecting decorations, there will be nothing to prevent the sound of his voice reaching all parts both of the floor and the galleries. The architect thus claims to have thoroughly provided for seeing and hearing the orator, and for observing the movements of the House.

*Circulation.*—The President will reach his chair by a private door in the base or axis of the hall, while the deputies will enter by eight doors opening on to an interior gallery, 10 feet wide, running round the interior of the Chamber. This gallery is on a level with the large reception-halls of the Palace, and 6 feet 6 inches above the floor of the House; so that, contrary to the arrangement that obtains in our House of Commons and the present Chamber of Deputies, members will have to descend instead of ascending to their places, and thus all the movement and disturbance necessarily caused by arrivals and departures will take place at the circumference instead of the centre. This gallery, moreover, terminates at each end in a flight of steps, enabling members to get to the *bureaux* (tables) of the House, which are on a line with the President's fauteuil, without passing right across the Chamber. The seating surface is divided into nine sections, the seven central ones of which are again cut into two by gangways opening into a passage running round the arc, half-way up the slope or tier of seats. Interior circulation is thus well cared for, while exteriorly the new Chamber will be connected with the Palace by a large rectangular hall, and with the buildings to right and left of the Grand Cour by two vestibules.

*Area and Seating.*—The area of the hall at the topmost range of deputies' seats is 791 square mètres, against 440 in the present Chamber, while, taken at the wall of the second gallery, which may be regarded as the true exterior of the building, it is 889 mètres. The height is 18 mètres, and the number of seats 689, the minimum space for each being .65 of a square mètre, instead of only .425 in the Palais Bourbon.

*Galleries and Tribunes.*—Around the main ellipse or curve of the hall are two large public galleries, one above the other, the first of which contains 550 places, arranged in four rows of seats, and the second 460 places, in three rows. Access is obtained to each of these by nineteen doors, opening at regular intervals on to spacious corridors; the three front rows in the first and the two front in the second are divided into stalls. M. de Joly calculates that, in addition to tickets for reserved seats, 166 places in the lower and 393 in the upper gallery will always be available for the public. On the right of the first gallery 165 places are reserved for the press, and other seats are specially allotted as follows:—Twelve for general officers, 22 for senators, 24 for ministers, 24 for the President of the Republic, 28 for the Diplomatic Corps, 24 for the President of the Chamber, 18 for the Council of State, 24 for the vice-presidents and secretaries, 24 for ex-deputies, 24 for the questors, and 166 for the public.

To right and left of the bureaux of the House are two special tribunes, holding 60 persons each, and reserved expressly for members of the Senate.

*Lighting.*—Daylight will be admitted by eleven large bay windows, measuring 3½ by 5 mètres, in the side walls; the total lighting surface thus afforded being 154 square mètres. Each of these windows will be doubly glazed, the outside panes being of ordinary white glass, and the interior of slightly tinted squares, set in lead, the effect of which will be to soften and mellow the light, while blinds are provided to keep out the direct glare of the sun when occasion requires. For artificial lighting the architect has adopted the luminous ceiling, and the glazed part occupying the centre will present a surface of no less than 150 square mètres, composed of grained glass, relieved with designs in red and gold, to imitate the Roman ceiling drapery. With this, of course, either the electric light or gas can be used.

Ventilation is provided for on the same system that has succeeded so well at the Opéra Comique in Paris—viz., by the introduction of fresh air through the floor of the Chamber, and escape of the foul and heated atmosphere through ventilators in the roof. The execution of the above plan will necessitate important alterations in the existing dependencies of the Palais, in order to place them in due connection with the new Chamber.

One of the greatest inconveniences of the present situation is the distance of the various services from the Chamber; in the plan under consideration this is entirely altered, and the new hall will be, so to speak, surrounded by its various offices and dependencies. By the Salle des Pas Perdus it will communicate with the lecture-hall, refreshment-rooms, library, &c., and by the



vestibules to right and left access will be gained to the *bureaux*, committee-rooms, offices of inquiry, shorthand-rooms, *secrétariat général*, President's rooms, the official report, pay department, post, telephone, and telegraph offices, lavatories, &c.

The lecture-hall will occupy the present Salle des Séances, the floor of which is to be levelled by the removal of the existing tiers of seats, &c. The refreshment department will be established in the Salle Pujol, the present buffet being turned into a smoking-room. The library remains in its present quarters, but several fresh galleries on the first floor will be added to it; the Salle Delacroix is to be set apart for the use of deputies, as a conversation and resting-room; the Salle Mirabeau and its side galleries will be continued to be used for the reception of visitors and friends of the members, and, as they are considered insufficient, another large hall, 33 mètres by 19 in dimension, will also be set apart for this purpose.

### PUBLIC SCHOOLS IN SCOTLAND.

IN his report on the schools inspected by him in the Ayrshire district Mr. J. W. Marshall, M.A., writes:—The organisation of the Government school in seven classes or years settles in great part the architecture of the school-house; but the number of children taught, the desks, passages, &c., have also to be considered. A certificated teacher is qualified to teach sixty (eighty) pupils, and we might infer that every schoolroom should be built to accommodate that number. A fully-organised school will have a room for every class according to the size of the class. This organisation is seen in Kilwinning, Stevenston, and Dalry West-end schools. To take up a section of a class there are small classrooms in which a pupil teacher or monitor can work. This kind of school is perhaps expensive where certificated teachers are employed, but with ex-pupil teachers it is sufficiently economical. However, it is suited only for schools with an annual average above 300. There are in this district several schools, particularly the Ardrossan schools, Cumnock, Maybole, &c., which are the largest in the district, and which do not seem to have been built on any very precise plan. Generally they allow of only three departments, and adopt the hall system with very insufficient classrooms. The hall is convenient for an exhibition or inspection day, but for teaching purposes it is unsuited. For example, we may have two or three rooms, each 56 feet by 22 feet, in which three or four teachers work together. There will generally be three grades; the natural order will be to group the 1st and 2nd Standards in one department, the 3rd and 4th Standards in the middle department, and the 5th and 6th Standards in the highest departments. Various combinations, however, are found. In Old Cumnock, for example, the senior master has the charge of the 1st, 2nd, and 6th Standards, which is rather a peculiar conjunction.

Nothing is gained by a schoolhouse of this kind. The schoolhouse is first built, and then the classes are made to fit into the building; whereas the schoolhouse should be constructed to suit what it has to hold. For schools like Ayr Newtonhead, Old Cumnock, Maybole, &c., the classroom system alone is suited. In Maybole School, where subdivision is practicable, there is still a plurality of classes worked together, and absolutely no classroom accommodation.

For schools with an average between 200 and 300 three departments are necessary. Unfortunately, even where we have three teachers, as in Muirkirk Ironwork School, we have not three proper rooms. What is the use of a hall 58 feet by 24 feet, if five classes have to be taught in it simultaneously? A room 40 feet by 24 feet would suit much better for a main room, and a second room, 35 feet by 21 feet, would allow the middle standards to be thoroughly trained. In Newton Academy, (Kilwinning) Eglinton Ironworks, Lugar, Catrine, and Irvine Loudon Street schools, the formation of a middle department would be a great improvement.

There is great variation in the proportions of the schoolhouse. In Catrine P. School the principal room is 68 feet by 19 feet; in Crosshill School it is 78 feet by 19 feet; in Dunlop School it is 72 feet by 20 feet; in Girvan Burgh it is 72 feet by 25 feet. Now, unless it be for preaching, what is the use of a room 72 feet by 25 feet? In it three or four pupil-teachers waste their lungs and their lives to no great purpose, while the certificated teachers work leisurely in the classrooms. What confusion and uproar would the working of 225 pupils produce, all in a single room! It may be convenient to have a room 50 feet to serve as a hall, but as a rule no room should be larger than 40 feet by 24 feet. Indeed a room 33 feet by 22 feet is the most suitable, for it forms a department, and without subdivision into departments thorough school work cannot be done. Discounting schoolrooms above 45 feet in length as unsuitable, and taking 35 feet to 40 feet as the proper length of the principal room, we find that the breadth should be  $\frac{9}{15}$ ths to  $\frac{10}{15}$ ths of the length. It is rare to find a room half as broad as it is long; but where we do find it, as in Ayr Lady Jane Hamilton's School, the advantages are apparent for purposes of grouping under collective teaching, and for drawing out classes under oral or slate examination. The Cumnock Roman Catholic School, which is one of the last built, measures 54 feet by 32 feet, but there is no

classroom accommodation, although there is already an average of 148. In the (Kilwinning) Eglinton Ironworks School we find two teachers and two pupil teachers working together in a room 41 feet by 30 feet. The Girvan Parish Schoolhouse is very inadequate, for the classroom is fit only for a cloakroom. In this school the head master, with two assistants and a pupil teacher, works seven classes in a single room without any subdivision. A school with an average above 60 (100) should have two departments; and a school with an average above 140 (200) should be graded in three departments.

Mr. R. Ogilvie, M.A., the inspector for the counties of Dumbarton, Stirling, and Clackmannan, writes:—The supply of accommodation may be said to have come tolerably complete from the hands of the first boards. It is to their vigorous and comprehensive efforts that Scotland now owes a network of school buildings; which, as I have stated before, are not only unequalled but not even approached in any other country in Europe. Most of the additions subsequently made have been necessitated either by the growth of the population or by the transference of voluntary schools. The new Hermitage Public Schools, Helensburgh, is a noteworthy exception. It is by far the most expensive as well as the most elegant structure in my district.

But if the first boards exceeded the most sanguine expectations in their generous and well-timed expenditure of public money, they fell into one or two radical mistakes, which their successors in office have learned, and are every day learning more and more to avoid. They were required to supply a certain amount of cubical space, and they simply instructed an architect to draw out and submit plans for its provision. Knowledge of school-keeping does not come even to architects by nature, and yet, speaking for the three counties which comprise my district, neither myself, nor any other professional educationist, so far as I am aware, was consulted in the construction of a single school. Instead of rashness, School Boards nowadays rather show an excess of caution, and rarely execute any important alterations on their own responsibility.

Many of the most glaring defects of the original buildings have been recently remedied. Miniature classrooms have been enlarged and big unwieldy principal-rooms subdivided. Dundas School, Grangemouth, is an excellent case in point. Huge rooms, in which two or three teachers shout each other down, have been too long the order of the day, from a prevalent popular notion of some latent virtue inherent in the headmaster's eye. Classrooms even have been brought under its awe-inspiring and order-compelling range by means of glass peepholes and all sorts of contrivances. But if schools can be disciplined, they cannot be taught by eagle glances. The matter of fact at least is that the best headmasters, though making their influence educationally felt in every corner of the school, have in almost every possible case betaken themselves to the smaller rooms. If assistants, who have now to a large extent supplanted pupil teachers, cannot maintain order and manage a given standard or other section, they are simply disqualified for their post. If two or three of them have to work in the same apartment, teaching is deprived as much of its luxury as of its effect.

### THE RELATIONS BETWEEN WESTERN AND EASTERN ARCHÆOLOGY.

A MEETING of the American Association for the Advancement of Science was held lately in Montreal. A paper on "Some hitherto unnoticed Affinities between Ancient Customs in America and the other Continents," by Dr. Phené, F.S.A., was read in the Section of Anthropology on August 28.

The author explained that as one of the great problems to be worked out, or which at least it is desired should be worked out, by all who have given any attention to the subject, is that of the races and civilisations which once flourished at the southern end of the northern continent of America, and which had evident connections with the more northern parts of what are now the United States, through those great ducts, the Mississippi and other vast river valleys, tending to the latter direction. He had devoted many years to the investigation of the subject. He had read papers upon certain particulars of this subject in the capitals of those countries in which he had found corresponding remains, so far as those particulars applied respectively to such countries. Great difficulty, he said, existed through absence of literary records, possibly lost in the destruction of such evidence by the conquerors of Mexico, the only city and country in which civilisation with rude but graphic literature and illustration existed on the face of this vast continent. And the difficulty was increased from the fact that, rude as it was, civilisation had then reached a point at which literature became essential, and though now to a great extent lost, had then actually taken root.

The customs which are shown to have existed in the great river valleys of America, though read with difficulty by the light of the strange monuments still existing there, seemed to the author to have had parallel existences on the other continents. In evidence of this he gave illustrations, by drawings and diagrams, of many earthworks and stone constructions which had been examined by



him in company with a large number of scientific men, and which agreed in the method of executing the earthworks, of arranging the plans and designs, and in the evidently similar purposes for which they were designed, and to which they had been devoted.

The points on which he rested his argument for the affinity of the American mounds and earthworks, and necessarily the customs with which they were connected, with those of Great Britain and a large number of similar works in France, Spain, Greece, Asia Minor, Persia, and China, were in the first instance the existence of relationship to each other, always in the vicinity of rivers, of mounds representing animal forms, and—with some special exceptions—the close proximity of vast works or camps for defence, huge enclosures or oppida for civil occupation, and other evidently sacred enclosures for solemn rites, worship, and sepulture. In America these evidences went no further, but in the vicinity of the mounds he had traced in Western and Eastern Europe, and in Asia Minor, and still further east, not only were all these features attendant, but the localities also abounded with mythological and traditional legends, and the retention of strange and weird ceremonies, to the present day.

He selected as illustrations of the American mounds those in the forms of serpents, the alligator (or mythical dragon), and the human form. The serpent was shown by the late Mr. Squire to have been executed in two ways—viz., by the solid continuous serpentine form, and by a series of symmetrical mounds uniformly placed in curves. The reader gave examples of each of these on diagrams, and explained that they existed in large numbers in Great Britain, similar in proportions and construction to those of the American mounds, which were kindred in form; and accompanying these were, he stated, in every case, extensive areas occupied by similar camps and enclosures for civil occupation, or oppida, and also separate enclosures for worship and sepulture. The characteristic physical, natural, and art features were also curiously persistent in each case, a triple imagery having been in very many instances studiously represented, both by places of selection, as the vicinity of triple-peaked mountains, and in construction, by triangular chambers and triangular enclosures in or about the head of the animal forms, as well in the American as in other similar mounds. Since his arrival at Montreal he had heard of indications of this having been an Indian burying-ground. They appeared often to have selected places of previous occupation, as in the mounds; and the triple hill and triangular piece of land at its base were significant. The works in Great Britain, Spain, France, &c., were found to contain chambers filled with cremative matter, and had studied arrangements for preserving the outlines of the animal forms, as shown in the diagrams, and were generally surrounded with vast lithic arrangements, and each, as a rule, was in the centre of an extensive necropolis of the primitive inhabitants. The legends and traditions clustering about these places were always of the same class in the other continents, and almost always had reference to man as the possessor and the serpent or dragon as the persecutor or destroyer, and this whether the tradition was one of uncultured and primitive existence, or of the highest classical-art ages and localities; and though such traditions did not exist in America, yet not only did their huge mounds simulate these forms, but there had been dug up from their mounds rude sculptured figures of the human form, and also of entwined or coiled serpents, showing that in their construction the same ideas, if not similar legends and traditions, had existed, as those which originated the *giganto machia* of Pergamos.

Amongst other numerous and striking examples of these forms in Great Britain, corresponding with the animal and human forms in America, were some very remarkable and yet but little-known representations of the human form belonging to a rude and unlettered age, perhaps corresponding to that of the semi-barbarous age of Mexico, which are found on the coasts of Devonshire and South Wales sculptured in stone, a very remarkable example of which also existed near West Hoathly, in Sussex, which was traditionally stated to have been worshipped as a potent deity (the Goddess Andras) by the early Keltic inhabitants. In the vicinity of these rude figures in the western and eastern extremities of the South of England, were two enormous *intaglio* representations of the human form, corresponding to the *intaglio* forms at Milwaukee, in Wisconsin, only one of which had been mentioned, and that in a very cursory manner, by writers on the comparison of these works with those of America; while their surroundings had been completely overlooked. The one not referred to was by far the more important, both in size and similarity, being in the exact attitude of the mounds in the human form of the American mound builders. About midway between these two figures was an equally enormous and well-known representation by *intaglio* of a horse. These figures were all cut in the chalk hills, and might be said to be protecting deities of the three localities in England most abounding in remarkable and vast areas of camps, oppida or settlements, and places of worship. The whole district from Dorsetshire to Land's End being commanded by the gigantic form in Dorsetshire; that of the miles of stone avenues on both sides of the Medway in Kent, terminated by Kit's Coty House at one end, several *allets couverts* at the other, with the huge stone figure at West Hoathly and the wood of Anderida to the south, were commanded by the similar gigantic *intaglio*

figure in Sussex; and the central and more important districts of Stonehenge, with the primitive and stupendous temple of Avebury. Its sinuous avenues of stone, and extensive earth embankments, the great tumulus of Silbury Hill, the avenues of stones near Amesbury, in the style of those at Carnac in Brittany, the large number of camps, the trilithon called the "Devil's Den," and the great dolmen known as "Weyland Smith's Cave," appear under the protection of the "White Horse." Metallurgy, a great feature with the mound-builders of the Mississippi, was also the peculiar occupation of one, if not of two, of these three districts of southern England and of many of the other localities in which similar works were found in Europe and Asia. And such metallurgy was for all utilitarian purposes confined in every such country in which these works exist to the two metals tin and copper, and analysis showed the proportions in the amalgamation of those metals to have approximated in America, Europe, and Asia. The parallelism went further, and was continuous in its track eastward. Brittany, Spain and France on each side of the Pyrenees, and so on to Asia Minor, had the same combined features. In the valley of the Meander, in Lydia, the vast figure of "Niobe," mentioned by Homer, still existed, sculptured on the side of a mountain, and, as well as that of "Sesostris" in an adjacent valley, also so sculptured, overlooked the district in which are the multitudinous tumuli near the Gygean Lake; and the fortifications and camps of the acropolis of Sardis corresponded with those already referred to in position and design; and the same features were found at Ephesus, Smyrna, and Pergamos in a striking degree, and extended, as shown by careful drawings and diagrams, onwards eastward as far as China. Considering the skill and thought required to plan such enormous figures with any regard to proportion, and seeing that all the figures had similar accompaniments, the author concluded by observing that they seemed to him to have been the result of a practice and culture transmitted with concurrent customs by way of the Pacific from one continent to another.

#### THE WALLACE AND BRUCE MEMORIAL.

THE members of the Treasurer's Sub-Committee on Properties, of the Edinburgh Town Council, met on the 8th inst., for the purpose of inspecting the competitive designs for the memorial to Wallace and Bruce proposed to be erected with a sum of money bequeathed to the Corporation by the late Captain Hugh Reid for the purpose. Captain Reid's will provided that 1,000*l.* should be placed at interest, which interest was to be paid to the testator's widow during her lifetime, after which the principal and interest should accumulate as a fund for twenty-five years to assist in erecting some memorial to the two national heroes. The will further suggested that the monument should take the shape of "an ornamental piece of water in the North Loch, with a fountain in the centre, and colossal statues in bronze of each hero in conference." The stipulated twenty-five years after Mrs. Reid's death having elapsed, the Corporation intimated that they desired to receive, in open competition, designs of the figures for the memorial, and among the conditions imposed on competitors were the following:—That the sum to be allowed for the completed work shall be 2,000*l.*; that the competitors whose designs are second and third in order of merit shall receive, out of the city's common good, premiums of 30*l.* and 15*l.* respectively, but in the event of no design being accepted no premium will be awarded; that the figures of the memorial shall be colossal, not less than 12 feet in height, and that those in the competitive models shall be of the uniform height of 3 feet; and that, while following generally the indications given by Captain Hugh Reid as to the site and character of the memorial, the treatment of the designs in detail, as well as the suggestion of the most suitable site within the locality indicated by the terms of the bequest, shall be left to the discretion of the competitors. Seven sets of figures have been put forward for competition, and, while varying considerably in style and in merit, the majority are creditable pieces of sculpture. In most cases the warriors are represented as clad in mail and armed, the Knight of Elderslie with his famous double-handed sword, and his compatriot with the short battle-axe wielded with such deadly effect against the English knight at Bannockburn. Meanwhile the names of the respective artists have not been disclosed, the models being merely distinguished by numbers and mottoes. After the committee had inspected the designs it was decided to adjourn the meeting without coming to a decision, and to invite the members of the Council to make an inspection and express an opinion regarding the merit of the several designs.

**York.**—Works of renovation and decoration, ventilation, &c., have just been completed at Monk Bar chapel. The work has been carried out under the direction of Mr. W. Browne, architect, Micklegate, York. Messrs. G. Simpson & Sons, of Heworth, have done the carpenter and joiners' work; Mr. Slater the plumber and glaziers' work; Messrs. Dearlove & Dodd supplied the heating apparatus; and Mr. J. Bakes, of Micklegate, executed the painting and decorating.



## NOTES AND COMMENTS.

AN amusing and novel kind of exhibition, organised by M. JULES LÉVY at his residence, 4 Rue Antoine-Dubois, will be thrown open to the invited on Sunday, October 1, for only four hours, viz., from 1 to 5 P.M. In this exhibition of incoherent art (*des arts incohérents*) will figure no less than 500 works executed on every conceivable sort of material: paper, wood, clothes, hats, domestic utensils, &c., for the most part by well-known members of the artistic, theatrical, and journalistic world. A few of these incongruous exhibits may be cited:—LUIGI LOIR, among other works, shows a bust with real hair and teeth; FRANÇOIS COPPÉE, a portrait of M. BARTAY D'AUREVILLY, taken with the pen in the space of one minute; LANGLAIS, a portrait of M. VEUILLON, on a kitchen skimmer; M. RAYMOND, a painting on a patent-leather shoe, &c. The demand for tickets among the *haute gomme* of Parisian society has been enormous, and what is called *tout Paris*, consisting, be it said, of 1,500 to 2,000 persons at the outside, will flock to M. LÉVY's rooms in the hope of seeing something new of its kind.

The old Polytechnic Institute is likely to become what it was proposed to be originally—namely, a place for instruction in applied science. It is the property of the Young Men's Christian Institute, and a system of technical education has been arranged which is so comprehensive as to rival that of the City Guilds. The fees to be paid are merely nominal. Thus, for example, in the evening classes for turning, lathe-work, and pattern-making, the fees for a session of seven months are four shillings to members of the Institute and eight shillings to non-members. The students will have the advantages of a large workshop, which will be fitted with lathes of an approved pattern. When the numerous applications of turning are considered, it will be surprising if the class does not at once attract a large number of artisans and amateurs.

A COMPETITION has been opened for the execution of a statue of RAPHAEL to be erected at Urbino, in Italy. In addition to the cast the competing artists must send in a paper explaining the idea they seek to express, and giving a detailed description of their work; they may also accompany the exhibit by a set of drawings illustrating the various aspects of the statue. The casts, &c., must be sent in at latest by February 28, 1883, and will be exhibited to the public on March 28 following, the anniversary of the birth of the painter. The result of the competition will be declared two months after the close of the exhibition.

EDINBURGH has hitherto not been credited with giving much attention to sanitary affairs; but any shortcomings in them are likely to be soon remedied. The first Sanitary Assurance Association was established in Edinburgh, and it has been, we believe, very successful. The Corporation has now undertaken the work for which societies of the kind were established. According to a report of the Public Health Committee, any citizen who has a suspicion that his drains or the sanitary arrangements of his house are not right, has only to send notice to the Burgh Engineer, who will immediately send a competent inspector to examine the whole sanitary arrangements of the house. This applies to rich and poor. The Burgh Engineer prepares a report containing a statement not only of the deficiencies, but also of the proper way to remedy them. This is a new departure in municipal government, and the results of it will be watched with interest throughout the country.

It is announced that, with the opening of the season, several of the principal Paris theatres are organising exhibitions of painting and sculpture on the staircases, in the corridors, refreshment rooms, &c., of their houses. The object of these exhibitions is to facilitate the sale of works, and the results obtained during former years have been satisfactory. In some of the theatres the works of art will be open to inspection by the public not only during the representations, but also for a part of the day. The first of these exhibitions was opened last week at the Théâtre des Nations, and among the exhibitors are several artists whose works have been hung at the Salon, and are well known to the public. The movement may be regarded as a sort of strike against the exorbitant commissions of the Paris picture-dealers.

THE lottery on behalf of the Art Orphanage is to terminate in a lawsuit, owing to a dispute over the chief prize—a picture by M. MEISSONNIER entitled *Le Reître Allemand*. For some considerable time after the drawing no one came forward to claim it, but about a fortnight ago the winning number was produced by a M. LEQUOY. This ticket, however, was in a lamentable state of dilapidation, being torn, dirty, and part of it missing, although the number and signature of Madame MARIE LAURENT, the president of the Orphanage, were intact. But owing to the condition of the document the Lottery Committee refused to hand over the valuable prize to the owner, and M. LEQUOY will be compelled to make good his claim before a court of law. In the meantime, on the demand of this gentleman, M. GEORGES PETIT, the well-known picture valuer, has been appointed *séquestre* or guardian of the disputed property.

THE twenty-sixth meeting of the Social Science Association will commence at Nottingham on Wednesday next. An inaugural address will be delivered by Mr. G. W. HASTINGS, M.P., to whom the foundation of the Association may be ascribed. Among the questions set down for discussion are the following:—“How can technical training be best associated with (a) primary schools, (b) intermediate schools, and (c) local colleges?” “In what way and to what extent is the endowment of research practicable and desirable?” “In what way can the influence of art be best brought to bear on the masses of the population in large towns?” “What are the proper limits of conservatism in regard to ancient buildings?” Mr. G. AITCHISON, A.R.A., presides over the Art Department, and his address cannot fail to be interesting. Most of the principal local manufacturers have agreed to allow the members to inspect their works.

ACCORDING to Mr. MILNE, of the Engineering College of Japan, the proposed Panama Canal is likely to be disturbed by earthquakes. In Japan those disturbances are not uncommon, and, according to Mr. MILNE, the houses which are unroofed are those with steep roofs. He infers that embankments must suffer in like manner, and that those which are intended to withstand the effects of an earthquake must have slopes given to them which will enable them to resist displacements caused by horizontal forces, and not simply be constructed by the usual rules and formulæ, where gravity, acting in a vertical direction against frictional and other resistances, is all that has to be considered. In the construction of the gigantic dam which is necessary to protect the Canal from the torrents of the River Chagres, similar principles will have to be considered. This also will be the case with all bridges, buildings, piers, embankments, and other constructions essential or accessory to the making of the canal. Other principles of construction especially adapted to earthquake-shaken countries will also require serious attention.

THE decision in the Earl of DUDLEY's action against the authorities of Dudley has emboldened the directors of the Orrell Coal Company to claim 22,664*l.* 12*s.* 7*d.* from the Wigan Corporation for loss and damage arising through the construction of a sewer. The Wigan sewage is carried to a farm by a conduit seven miles in length, which passes over the coal-beds of the company. It is maintained that in consequence of the construction and maintenance of this outfall sewer, the mines cannot be worked in accordance with the usual and customary method of working without causing the subsidence of the surface and injury to sewer-pipes and works; that it will be necessary to leave unworked a large quantity of the mines, not only under the sewer, but under the land adjacent thereto; and that the company will be hampered and hindered in working the other portions of the mines, making the cost much greater. The Corporation disclaim the right of support, maintaining that the Coal Company may work their mines without any injury to the sewer, which has been so constructed that it will not be damaged by any subsidence; that no support, either vertical or lateral, is required from the plaintiff company; and that they are not liable, and will not pay the amount claimed. The case is now being heard at Lancaster before Mr. HIGGIN, Q.C., and it is understood that if the Orrell Company should be successful, many similar claims against the Wigan Corporation will be raised. This is a new impediment to sewage utilisation.









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DESIGN FOR THE NEWPORT TOWN HALL.

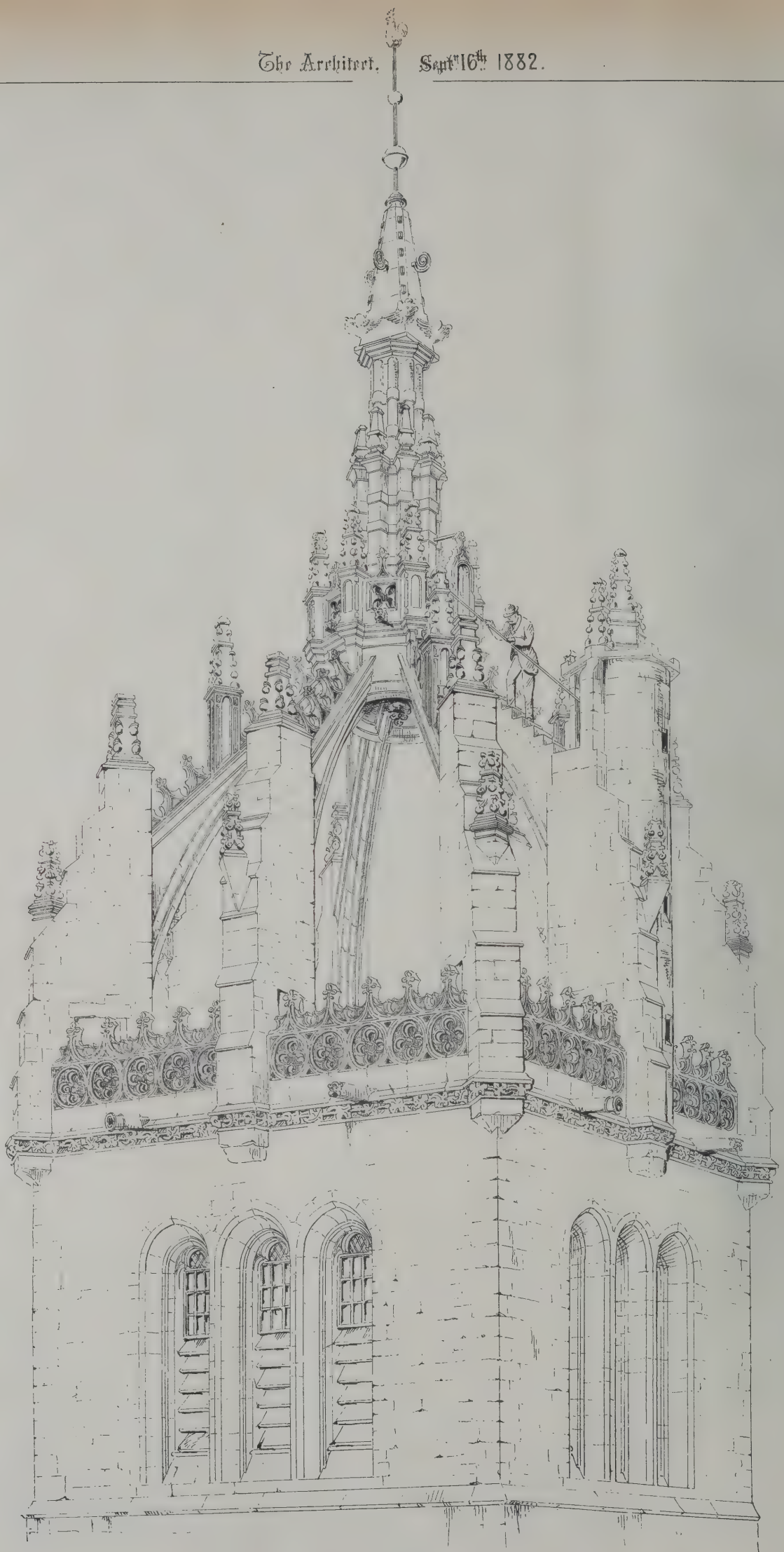
VIEW FROM COMMERCIAL ST.

WM. M. HODGES, ARCHT.





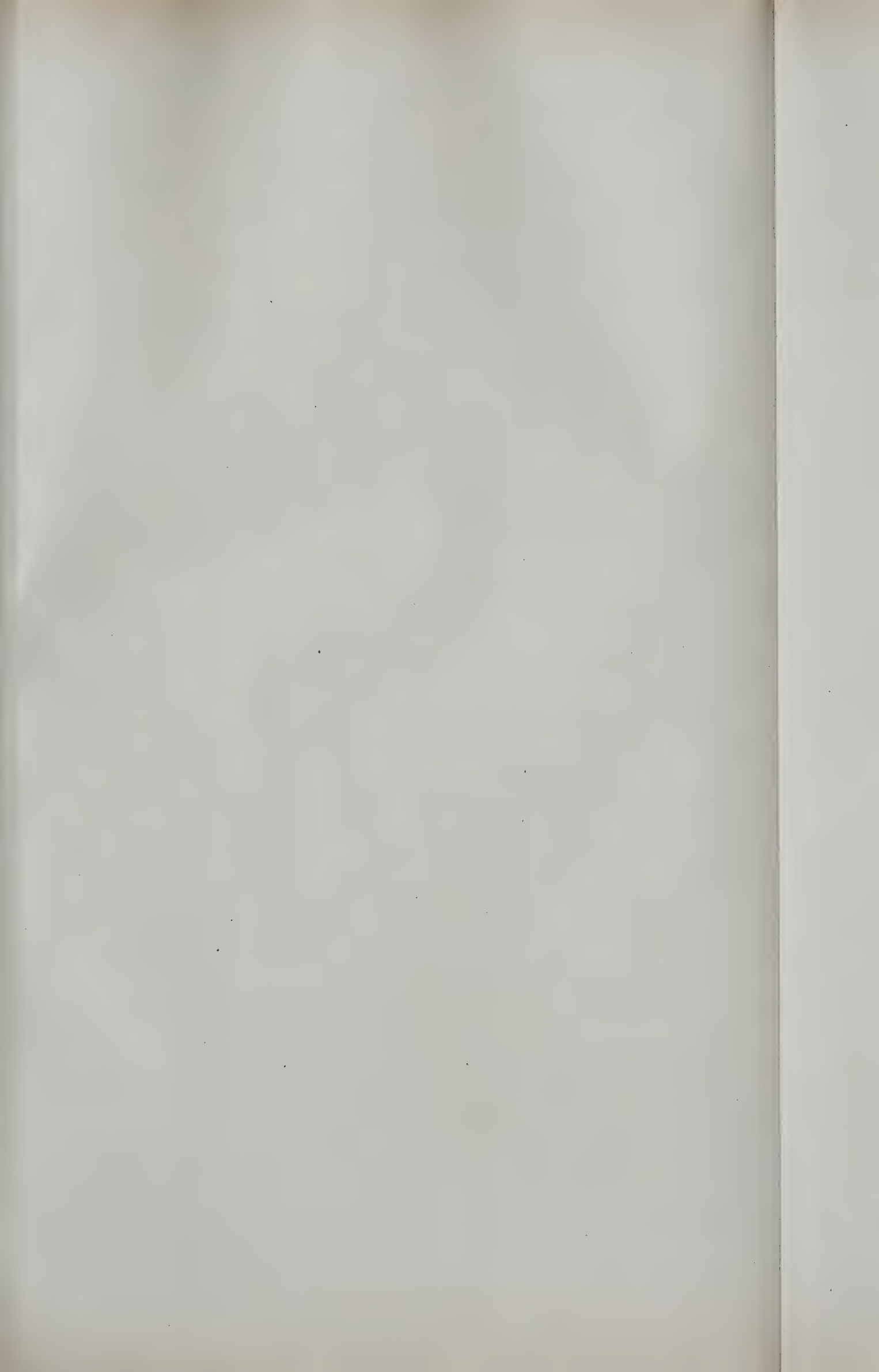




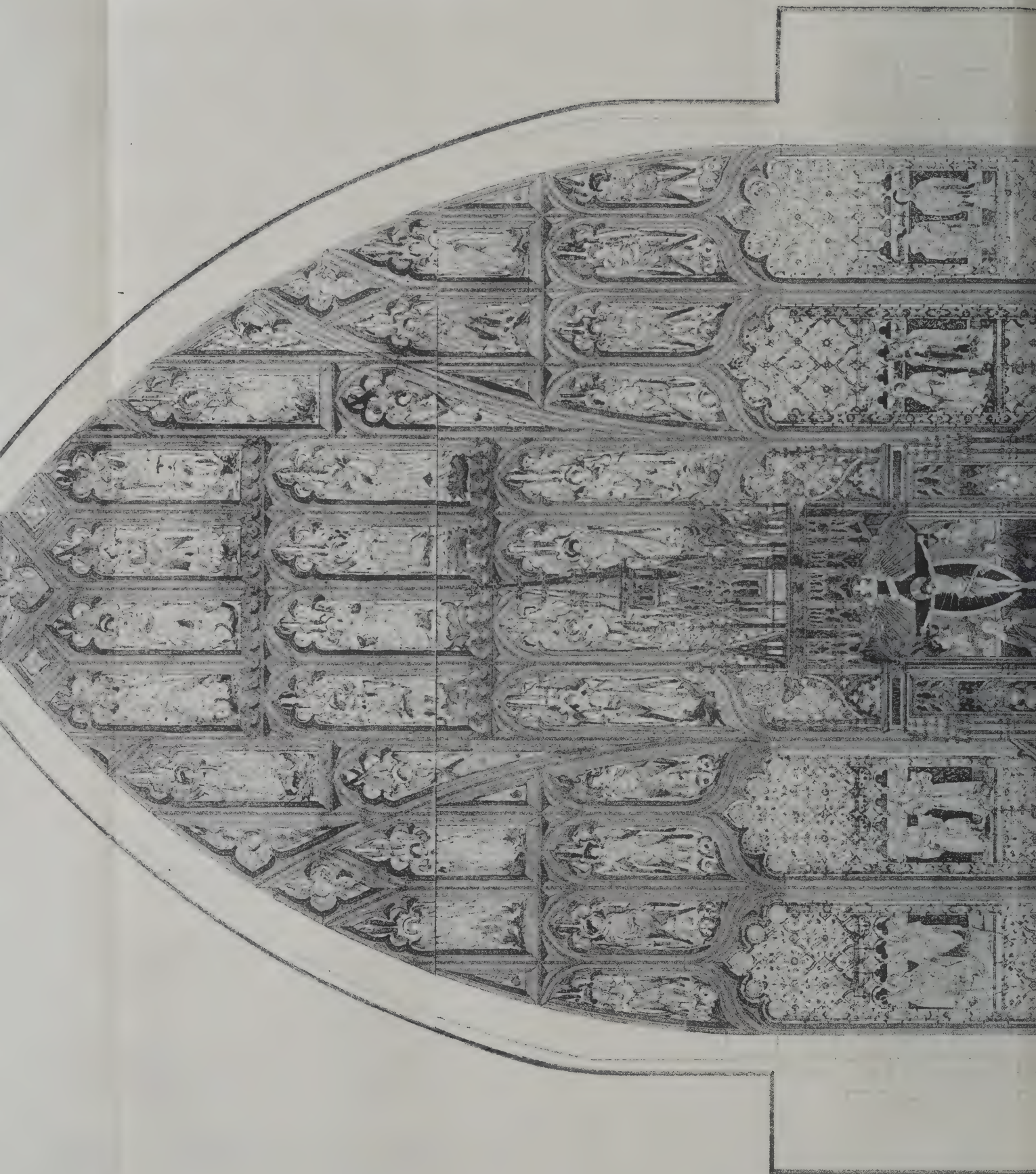
THE TOWER OF ST. GILES' EDINBURGH.

MEASURED & DRAWN BY JOHN HUTTON.

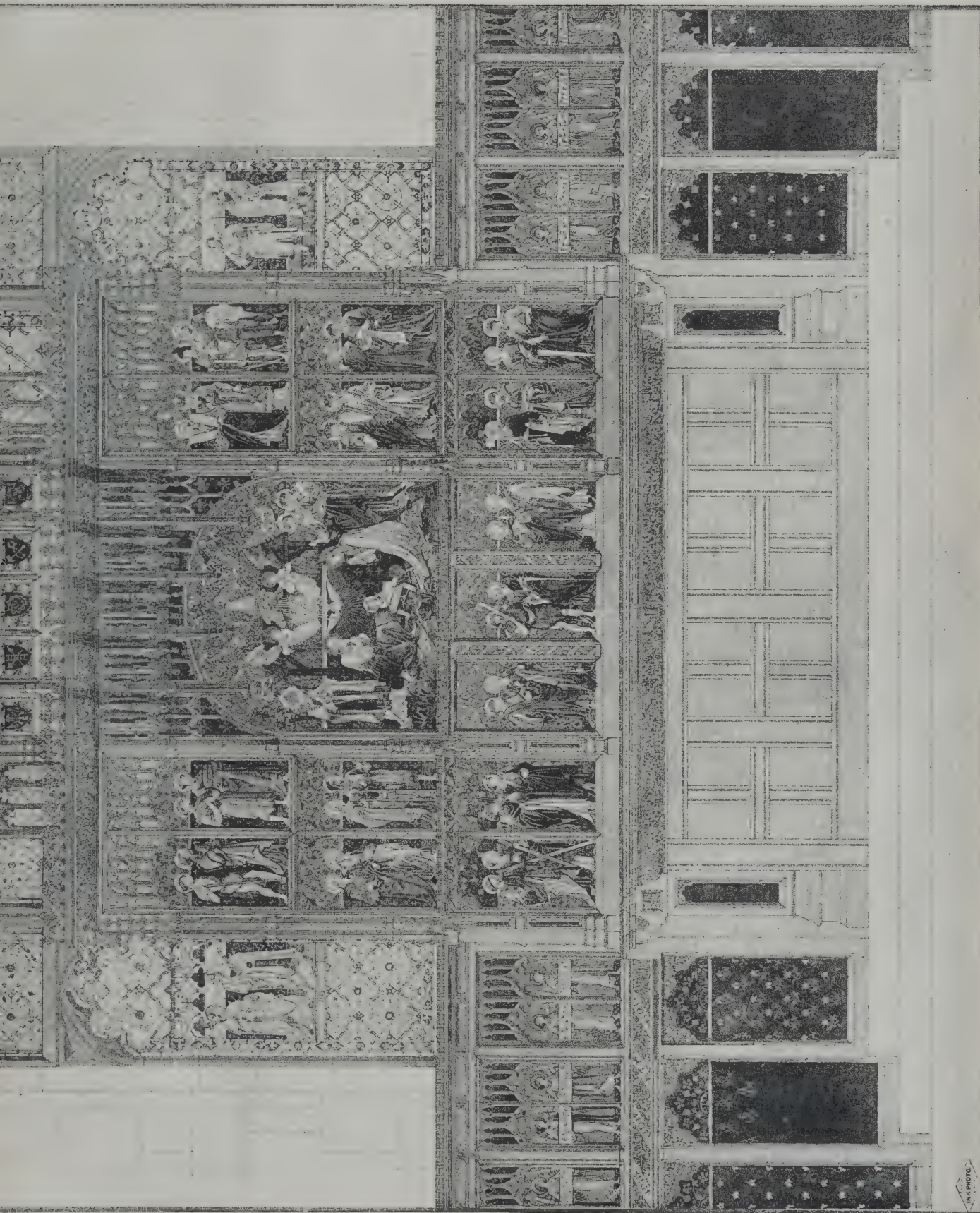










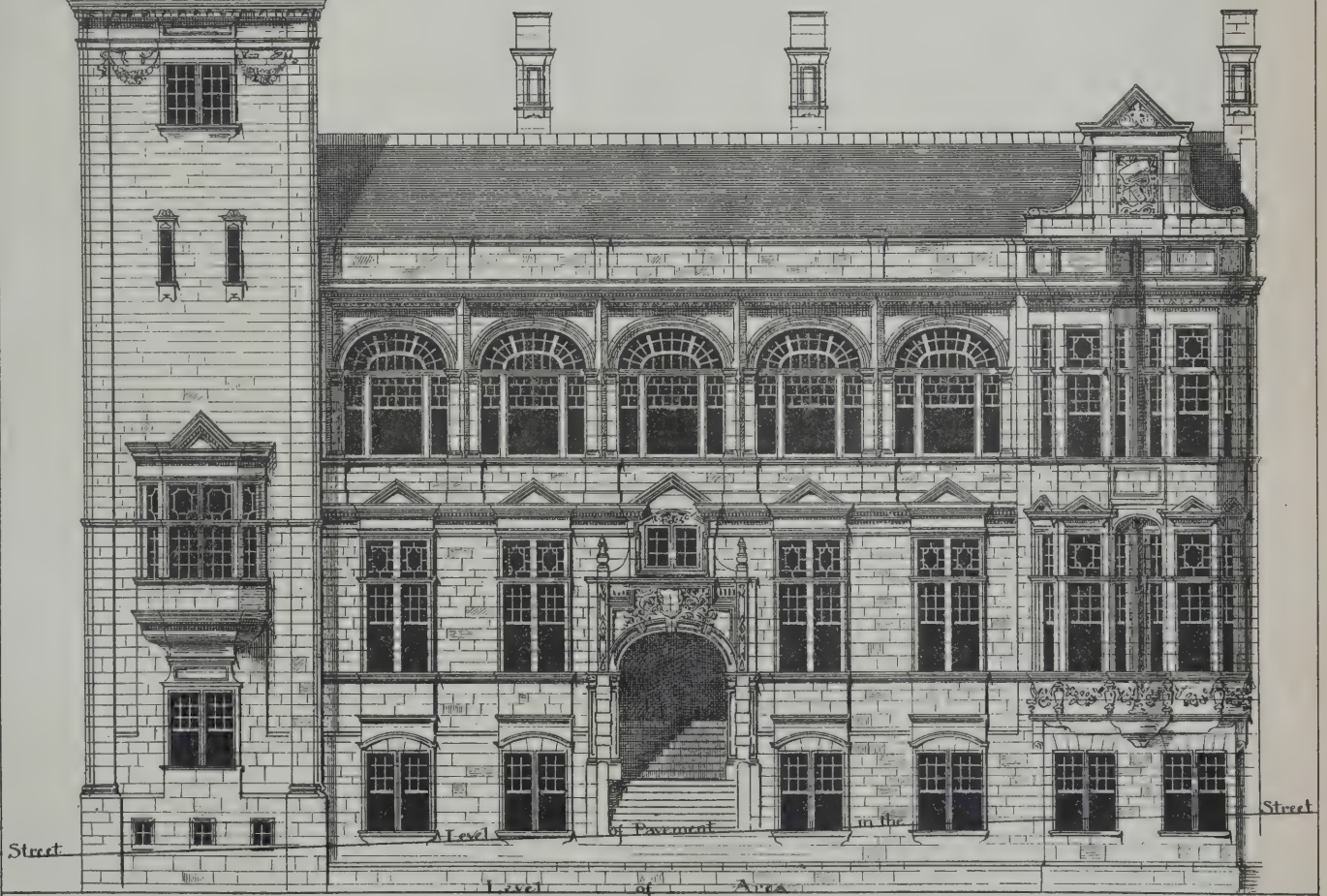
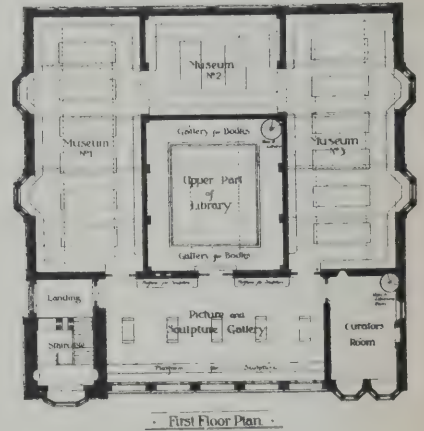
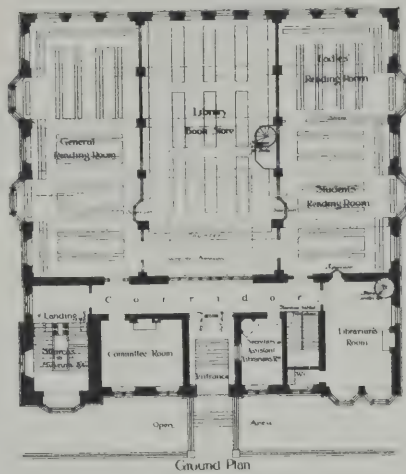


REREDOS FOR GRANTHAM CHURCH, LINCOLNSHIRE.  
ARTHUR W. BLOMFIELD, M.A. ARCHT









Front Elevation

DESIGN FOR THE PUBLIC LIBRARY.

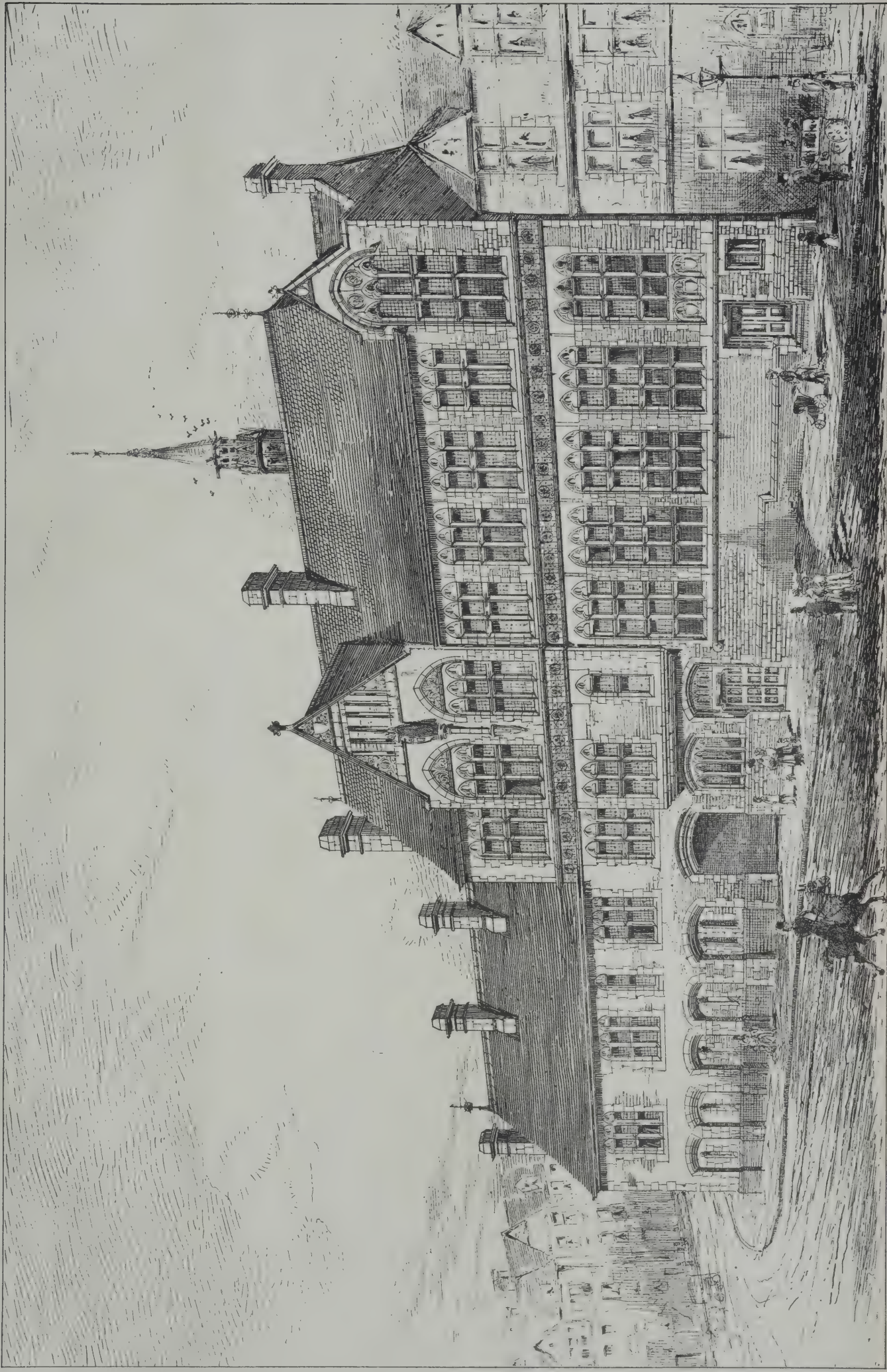
BY R. KNILL FREEMAN

W. & C. 22, Mark Lane, London E.C.









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DESIGN FOR THE NEWPORT TOWN HALL.  
VIEW FROM NEW ST  
WM. M. HODGES, ARCHT.







## ILLUSTRATIONS.

REREDOS FOR PARISH CHURCH, GRANTHAM.

THIS illustration has been reproduced by the ink-photo process from the drawing exhibited by Mr. A. W. BLOMFIELD, M.A., at the Royal Academy this year.

DESIGN FOR PUBLIC LIBRARY, OLDHAM.

THIS design was submitted in the recent competition by Mr. R. KNILL FREEMAN, F.R.I.B.A., of Bolton.

DESIGN FOR NEWPORT TOWN HALL.

WE publish in this impression two views submitted, under motto "Calenig," for the Newport (Mon.) Town Hall competition. The architect, Mr. WM. M. HODGES, claims to have strictly carried out the instructions issued to competitors. The chief difficulty was in the site, as shown on the plan, and the existence of a right of way through the building. These have been skilfully treated. The police-court is placed on the lower ground-floor, having an entrance from the new street; and adjoining, but with an entrance from Merchant Street, are the police-station, cells, &c. The fire-engine station, with stabling, is in Austin Friars, where also are the School Board offices. On the ground-floor proper are the public offices, the Town Clerk's office being located on the right of the principal entrance. The first-floor front is entirely occupied by the assembly-room, approached by a handsome staircase, and at the back are the Council chamber, committee-rooms, &c. These have a separate staircase. The material intended to be used is Bath stone for the principal front, and rough rag, with Bath dressings, for the other elevations. The estimated cost is 8,300*l*.

TOWER OF ST. GILES, EDINBURGH.

THE subject of illustration is supposed to have been erected about the middle of the fifteenth century, at which period extensive alterations were made on the cathedral. Generally spoken of as a lantern or crown, it is one of a very few remaining examples, and is perhaps the best of such. As will be seen from the drawing, it consists of eight buttresses, from which spring a similar number of vaulted ribs, supporting a lofty spirelet in centre. The buttresses have originally been pierced at level of main parapet, to allow of a free passage all round, possibly for the purpose of sentinel duty, as in troublous times the tower has been occasionally put to military uses, particularly so in 1571, when KIRKCALDY of Grange fortified the tower with cannon, to enable him to hold the town against the Regent MURRAY. The ascent from main parapet is by a steep, wheeling stair, which forms part of centre buttress on east side, and thence over the vaulted rib to upper gallery, from which the whole city can be viewed. In 1648 the structure was found to be in so ruinous a condition that a complete overhaul and repair were considered necessary. At this time the main pinnacle or spirelet would seem to have been rebuilt, as also the greater portion of crocketed pinnacles and cusped cresting on back of vaulted ribs, the openings in buttress being filled up with masonry. These repairs arrested the progress of decay for two centuries, when it was decided to tie all the main supports together to prevent bulging; this was done by iron tie-rods, going crossways from buttress to buttress, at level of springing of vault. During its various repairs the lantern has lost its Gothic character considerably, more especially in the spirelet before mentioned, which, if detached from the lower portion, would be difficult of architectural classification. Standing at a considerable elevation from street, its defects in detail in no way detract from the picturesque effect of the tower of a building, rich in historic memories. The cathedral itself, which for long was partitioned off into three distinct churches with galleries, is now in course of being cleared out and beautified by the munificence of Dr. CHAMBERS, the well-known publisher.

**Northowram.**—The corner-stone has been laid of a New Connexion Methodist chapel. The building is designed by Mr. R. F. Rogerson, of Brighouse, and will be plain in style, and comprise both chapel and school. The latter is under the chapel. There will be in all four classrooms, two at each end. The contractors were: Masonry, William Hanson, Shelf; joinery, J. Charnock & Sons, Halifax; plumbing, J. Holdsworth, Halifax; painting and plastering, Hinchliffe & Hainsworth, Northowram; slating, Jas. Smithies, Bradford.

## "IL GRECO."

MR. J. C. ROBINSON sends the following account of Domenico Theotocopulo, called "Il Greco," to the *Times*. It is *apropos* of the painting ascribed to the Spanish artist which was purchased from the Hamilton collection for the National Gallery.

This extraordinary painter was, in reality, a genius of the most irregular and capricious order, sometimes attaining to the highest excellence in certain directions, his works entrancing both eye and mind with the most exquisite and subtle harmonies, at times a very Beethoven or Mozart in painting, but more frequently a wild rhapsodist, in whose tempestuous imaginations there are yet, as it were, sweet and lively strains faintly heard amid a loud clangour of incoherent sounds.

From the first there was probably a strain of madness inherent in Il Greco's nature, which, judging from his later and more abundant works, would seem to have occasionally developed itself into absolute lunacy. The man was a problem and a *crux* to his own people; then, as now, it is evident that mere eccentricity had a certain attractive charm, for his pictures, even the oddest and most incomprehensible, were always received with a certain wondering respect and deference by his contemporaries. At all events Il Greco held a high position in his own time; and although judging from his productions one might have expected quite the contrary, his life and conduct were orderly and his bearing cultivated and intelligent. It is not only at the present day that his pictures have been compared with those of Titian, for Philip II., who was a cultivated judge of art and of all men best acquainted with the masterpieces of the great Venetian, who was his own court painter and whose glorious works were sent to him year after year fresh from the easel, said of Il Greco that, while sometimes he soared up to the level of Titian, he more frequently fell beneath that of his own reasonable performances. All that is known for certain of Il Greco is afforded by the scanty notices of Palomino and Cean Bermudez and the internal evidence of his own works. That he was a native of Greece is shown by the signature on his pictures, in which he so styles himself; these signatures, moreover, are written in Greek characters. He was working in Spain at least as early as 1577, and he died at Toledo, at an advanced age, in 1625. As to the sources from which he derived his style and knowledge of art, the evidence of his pictures is patent. Unquestionably he was a scholar and follower of Tintoretto and the Bassanos, and acquainted with the works of Paul Veronese, and that he had made a long sojourn at Venice before coming to Spain may be inferred from many indications.

But although the evidences of his early training are obvious enough, it must not be inferred that Il Greco was a copyist, or mere appropriator of other men's ideas and mannerisms; perhaps, on the contrary, a more distinct and original personality is not to be found in the rolls of art.

I may state what I believe has not hitherto found public utterance, that he was the real precursor and inspiring source of a genius infinitely greater than his own—Velasquez—for unquestionably Velasquez in his mature, perfected practice was strongly influenced by the works of Il Greco. Quite as certain as it is that Ribera was the model for the early works of Velasquez, so to those who are familiar with the abundant productions of the half-mad Greek is it that at a more advanced period they took firm hold on the fancy of the great Spaniard, and were utilised by him in the same manner as the works of Tintoretto and the Bassanos had previously been by Il Greco himself.

It is an unsatisfactory and more or less fruitless task to endeavour to describe by words only the characteristics of any great painter. Moreover, the actual inspection of isolated and subordinate works, taken note of in ignorance of the great bulk of his productions, is calculated to convey inadequate or even totally erroneous impressions of the general *status* of the master. Who, for instance, acquainted only with Velasquez's pictures of *The Nativity* or *The Boar Hunt* in our own National Gallery could form a true estimate of the style and æsthetic value of the master as developed in *Las Meniñas* or *Las Lanzas*? The little picture just acquired by the National Gallery, nevertheless, stands in much the same relation to the great works of Il Greco still *in situ* in his adopted country, and unless it is ultimately supplemented by other and more important specimens it will be but a feeble and misleading light, without any adequate *raison-d'être*.

Il Greco was, above all, a great and most original colourist. His palette may be imagined set with the iris tints from angels' wings, whose heavenly voices inspired a St. Cecilia. He had that inspiration or intuitive appreciation of colour which I cannot but think is in some occult way or other identical with the ineffable afflatus—call it melody, or harmony, or what not—which is the soul of music. Furthermore, in his fine works, Il Greco is seen as a most brilliant and graceful executant; while even his wildest productions are dashed on the canvas with a *furor* of manipulation, the novelty and strange originality of which alone arrest attention. It has been already stated that Il Greco found his types of humanity among the Spanish peasantry of his day; this is almost exclusively the case—Christ, the Virgin, the Supreme Being even, the angels and saints, whole armies of whom were depicted by his fertile pencil, are all alike common, usually ugly, sunburnt, horny-



handed creatures, full of variety it is true, for it is evident that Il Greco had a keen appreciation of salient characteristics of physiognomic types and points of individual difference. In this respect, indeed, he was superior to the Bassanos, his precursors and models in this homely style; but Il Greco's impersonations are never either vulgar or grotesque; he has, on the contrary, admirably caught and perpetuated the innate dignity of look and bearing of the old Spanish people, the pride of race stamped indelibly on every face. If, indeed, his labours had been mainly directed to portraiture, instead of to church work in general, it would have been a notable gain to art, for the few portraits by Il Greco which remain to us are very excellent; here, indeed, he may be most favourably compared with Titian. His grave and stately hidalgos, in their simple black dresses or glittering armour, have all the truthfulness and intensity of expression of that great master's impersonations. Moreover, in his portraits Il Greco seems to have emancipated himself entirely from the eccentricities and mannerisms so often seen in his subject pictures. Unfortunately his portraits are very rarely met with. I have never seen an example out of Spain, and there only in Madrid, in one or two private houses which still retain ancestral pictures. Such as I have noted, moreover, are all male portraits; I cannot recollect ever to have seen a certainly authentic portrait of a lady by this master.

It is impossible adequately to describe Il Greco's peculiar style of execution. It was, in fact, most variable. In his earlier and best works the manipulation is often in the highest degree dexterous and spirited, yet simple and unobtrusive. His touch is often as light and suggestive as that of Velasquez, and it is always rapid, clear, and brilliant; but in his "mad" pictures these qualities are seen in weird exaggeration; his handling is of the strangest fashion—long glittering streaks of pure colour, like knife-blades, are laid side by side or interlaced in the wildest confusion. A French writer, some years ago, happily characterised this sort of work as like "the clashing of sword-play." The whole, in fact, is weird, ghostly, and tempestuous. In one of these "mad" pictures in my own possession, which by a stretch of the imagination is supposed to represent the Salutation of the Virgin, the Holy Spirit, as a dove, is seen descending in a kind of Niagara cataract of fire, enveloping with flame-like tongues the awe-stricken Virgin, whose long, contorted figure is clad in angular drapery more like the faceted surface of scorched and lightning-stricken rock than any textile stuff. The Angel, moreover, rushes forward, brandishing his lily-branch, as if impelled by a mighty wind. The whole conveys the idea of some inexplicable convulsion of nature; but even in this extreme instance redeeming passages of original and beautiful colour may be discerned, like veins of rich metal running through the scoria of a volcano. Twenty or thirty years ago, this class of Il Greco's pictures abounded in Spain and were to be found in the shops of curiosity dealers or furniture brokers throughout the land. In my peregrinations I have, in fact, frequently left behind great canvases of the master, offered to me for a few dollars each, simply from the trouble and difficulty of transporting them. Of late years, however, such pictures have become much less common, and there are symptoms among the artists and aesthetes of Madrid that an era of Greco-worship may possibly set in. It will be inferred, nevertheless, from what I have said, that the really excellent works of Il Greco, the sane and solid pictures, as opposed to the maniacal extravaganzas alluded to, were never bandied about in this careless manner. The most precious and beautiful of his works are the small finished pictures, but of these he seems to have produced comparatively few specimens. They are always, so far as I am aware, religious compositions; I have, in fact, never seen any purely secular subject by the master other than portraits. These small finished pictures are now very rare. A charming specimen came under my notice a few years ago in Madrid. The subject of this was *The Adoration of the Shepherds*, a crowded composition of small figures, painted with exquisite grace and facility, and sparkling with brilliant jewel-like colour. This picture made its appearance in the hands of a famous curiosity dealer of the female sex, rejoicing in the appellation *La Jesusa*, whose fashionable establishment, which suddenly collapsed, was a nine days' wonder. The picture was deposited for sale with this personage, but, I think, very soon withdrawn by the owner. I daresay its whereabouts might be still ascertained in Madrid.

Il Greco's great works *in situ* are mainly at Toledo, and one of them alone, were there no other attractions in the grim old Gothic city, would be worth a pilgrimage. This is the famous *Burial of the Conde de Orgaz*, in the old church of Santo Tomé. Although but half visible in the dark chapel where it has hung untouched for three centuries or more, this picture can scarcely fail to strike every observer, the artist more strongly than the layman, as one of the great pictures of the world. It is a less vast and doubtless a less-renowned production than Velasquez's great masterpiece *Las Lanzas*, but to me, and I have been to see the picture repeatedly at many years' intervals, it has never failed to suggest direct comparison with that famous composition. I have, indeed, no doubt that it was a direct inspiring source of *Las Lanzas*. The pictures, moreover, have this in common—they are both crowded compositions of life-sized figures, all actual portraits, mainly of high-born

Spanish gentlemen clad in the splendid costume of their own day; for although the Conde de Orgaz was one of those semi-saintly personages who flourished ages before in the land, Il Greco has represented his interment as attended by a brilliant band of high-born hidalgos, priests, and acolytes in their splendid vestments of the second half of the 16th century.

The dead count, whose noble head droops over his cuirass as they lower him into his grave, clad in his full suit of splendid russet and gold armour, gleaming and flashing in the light of an evening sun, forms the central motive of a gorgeous turmoil of crowding eager-visaged figures; mail-clad knights and priests in rich embroidered copes and dalmatics; it is, in short, a glorious vision of rich and sparkling colour, impressed upon the canvas with infinite spirit and grace of style. In this work there is no eccentricity, no conscious mannerism, but in all parts most subtle renderings of nature, effected with that certainty of hand and seeming ease which is vouchsafed only at rare intervals to the most gifted. The general style and technique of the work are, in fact, eminently modern; the entrancing qualities of Rubens, Reynolds, and Gainsborough, as well as of Velasquez, may, indeed, almost be imagined as foreshadowed in this admirable picture. So far as I am aware, Il Greco is not represented in any of the European public galleries, except at Madrid, so that to artists and the public at large, who have not visited Spain, he is necessarily but a *nominis umbra*.

### THE DELABOLE SLATE QUARRIES.

ON Tuesday last the members of the Royal Institution, Cornwall, visited the Slate Quarries at Delabole, when the following paper was read by Mr. C. Bainbridge Rendle, one of the directors of the company:—The old Delabole Slate Quarries, which have this day been visited by you, the members of the two learned societies, the Royal Institution of Cornwall and the Royal Cornwall Polytechnic Society, have an especial claim to interest the antiquary as being probably among the oldest slate quarries in Great Britain still in active operation; for while it is said that the quarries of Lord Penrhyn, in North Wales, were first worked in the time of Queen Elizabeth, there are many old mural tablets in the neighbouring churchyards of honest Delabole slate dating back to an earlier period in the sixteenth century; and Carew, writing in the year 1602 of the Delabole roofing slate, describes it thus:—"In substance thinn, in colour faire, waight light, in lasting strong, and generally carrieth so good regard, as (beside the supply for home provision) great store is yearly conveyed by shipping both to other parts of this realm and also beyond the seas into Brittannie and Netherland." Borlase, writing in 1758 of the slate from these quarries, says that for its lightness and enduring of weather it is generally preferred to any slates in Great Britain, and describes the great quarry as in his time 300 yards long and 100 yards wide and 80 yards deep, observing "that all the slate is carried with no small danger on men's backs, which are guarded from the weight by a leather cushion." This system of working was still in vogue in the early part of this century, until the improved haulage of a one-horse whim and windlass superseded this primitive mode, and this again gave place to steam power, which was introduced about forty-five years since.

In those days these quarries belonged to several owners, who worked their beds of slate rock as deeply as they were able, and as they worked out one part, filled it in with rubble, or heaped it up around the headlands of their quarry as an ill-fated legacy to their successors, and the present company have had for many years this incubus of dead work to contend with, some evidence of which is still to be seen at the far end of the quarries.

Until the last few years the mode of working was to erect papet heads, or projecting wooden frames on the cliff of the rock, supporting huge wooden cranes, and by means of iron chains passing over these, steam power hoisted up the slate rock and rubble from the pit below. Two papet heads of an improved character worked with steel ropes instead of cumbrous iron chains are still used, but the future developing of the quarries is to be seen at the far end on the western side, where one steam engine hauls up an inclined plane in trucks the slate rock and rubble produced from four terraces or galleries. Of these the two upper galleries are taking off the tops or overburthen covering the slate bed, and also the deposited rubble left us by our predecessors, and will be met by corresponding galleries now being worked on the eastern side, thus surrounding the quarries, while the two lower galleries are commencing to work the permanent slate bed. When this system of galleries is fully developed to the bottom of the quarries the slate production will be largely increased, as we are at present only producing slate from the top and bottom of our slate bed, and the gallery system will ensure greater safety to our men, and less risk of serious slides or landslips.

The quarries and rubble heaps cover some twenty-five acres of land, the length of the quarry being on its western side about 1,300 feet, and the depth about 400 feet. At present about 420 hands are employed. In the past three years more than one million tons of slate rock and rubble have been taken out of the



pit. The indications of the slate bed at the far end lead the company to expect that these quarries are still in their infancy, as a most productive vein is found underlying the quarries at their greatest depth.

*Query.*—Is the name De la Bole of Norman-French extraction, or is the local nomenclature Dinabole the more correct one? As bearing on the latter a neighbouring farm is called Dinabroud.

### ENGLISH SCHOOLS.

THE following remarks on the condition of the schools visited by the inspectors in 1881-82 are taken from the reports presented to the Committee of Council on Education:—

#### *Bromsgrove District.—Mr. Barrington-Ward, Inspector.*

King's Norton is a very extensive parish lying to the south of Birmingham. A considerable portion of the suburbs of that great town are included in the parish. The population is at present about 35,000. It grows apace in the urban parts, the increase of inhabitants between the years 1871 and 1881 being no less than 12,333—over 62 per cent. A rapidly growing neighbourhood like this necessarily needs continual additions to its school supply, and the School Board has made such additions with no sparing hand. The cost of erecting the King's Norton Board schools is unusually, and I must say unnecessarily, high. The average cost of the buildings already provided (including sites) has been no less than 13*l.* 2*s.* 2½*d.* per child. The Harborne Board, on the contrary, was able to supply three new schools at the average cost of 8*l.* 17*s.* 7*d.* for each place provided. This is a discrepancy which tells plainly of reasonable economy in one place, the opposite in another. Fortunately for the King's Norton Board, the rateable value of its district is large, and the ratepayers are not very inquisitive. A fivepenny or sixpenny rate is therefore obtained with ease, and, if the ratepayers do not object, I suppose others need not find fault. I must, however, express my belief that cheaper sites might have been bought, and less ornate buildings erected. Elementary schools, indeed primarily for the children of the poor, and subsidised from local and imperial resources, should be provided in the cheapest possible manner consistent with permanence and efficiency. There is no need for ornamental brass gas-fittings, coloured glass screens, and other decorative articles, which, though not very costly in themselves, go to swell the bill, and could very well be dispensed with.

#### *Bath District.—Rev. H. B. Barry, Inspector.*

Though some schools are still held in old or adapted buildings, the schoolrooms in the district are generally very fair. More classrooms are, however, wanted. No infants' school should be built without a classroom, as the separation of the very young children is almost essential to discipline. Lobbies, too, are often not large enough properly to place hats, bonnets, &c. I recommend, wherever it is practicable, that each scholar should have a numbered peg. It is a bad example to the children to allow garments to be piled one on the other, or to be scattered on the ground. The school premises ordinarily, and not only just before the inspection, should be clean, neat, and well kept; yet there are parts of the premises which some managers tell me on the day of inspection that they have seen rarely, or then for the first time. More frequent washing of the rooms is also often desirable.

#### *Worcester District.—Mr. E. H. Brodie, Inspector.*

Minor improvements in out-buildings, warming, ventilation, &c., have been frequently carried out. It is still to be desired that the small, heavily-leaded windows, with their small diamond panes, through which struggles, in some village schools, a broken ray of "dim religious light," very fidgety to the eye, and of a headachy tendency, could be everywhere replaced by good square panes of glass through which might pour a generous flood of illumination, and which might be glazed against too intense a sun, or screened with blinds.

#### *Warrington District.—Mr. W. Scott-Coward, Inspector.*

The buildings vary much, many, too many, of the older ones, erected when notions of school organisation were as yet only in the embryonic stage, are no more than barely suitable, and make the school work more troublesome and arduous and less effective. The newer buildings are, of course, all more or less good; but even in them are found defects of sound, light, and ventilation which good school architecture should avoid. High-pitched roofs are bad for sound, light, warmth. Mullioned and traceried windows, with latticed panes, in my experience intercept much of the light, weary the eye with their many intersecting lines, and are not as well adapted for ventilation as those of a homelier style. The Board schools here, as elsewhere, are devoid of anything ecclesiastical in style, and are bright, cheerful, and ventilated even to draughtiness. I am far from wishing to see them adopted as models to follow. But I am sure that some of their advantages could be combined with the Gothic modified to suit modern school requirements, and that pretty as well as useful schools would result from the combination.

There are very few buildings now in which there is not a

separate room for infants, a matter of obviously great importance where boys, girls, and infants are taught in one department; and classrooms are more common than they were, though too often they are far too small. Good-sized classrooms are most useful in enabling teachers to separate the classes for instruction.

This most important element of good school organisation seems to me to become more urgent as the scope and aim of our national instruction widens. It seems to be next to impossible to produce the best results where the education of children in Standards I. and IV., V., VI. is being conducted in one room. Whenever it can be done, I urge the subdivision of large rooms and the isolation of classes.

The ventilation of the new schools I find to be generally satisfactory, not of the older ones. These depend upon the windows for what fresh air they get, which, in winter especially, is admitted scantily and rarely. On visits without notice one passes into the impurest atmospheres, where drowsy children are learning little, and devitalised teachers are working at half-power. Nobody in such rooms seems to have any perception of their want of pure air and unhealthy state. Ventilation should be *continuous*, and independent of the action of the occupants of the rooms. Tobin's tubes, admitting in a constant upward stream of cold air directly from without, if placed in sufficient numbers and adjusted at proper heights, are most efficacious ventilators. Besides, exits for the exhausted air should be placed in the roof, and the windows should open at the top. Open fireplaces are also good ventilators, and if properly constructed so as to throw more heat outwards than upwards, are effective warmers. The Manchester grate, when carefully put up, is one of the best warmers and ventilators I know; but if not carefully arranged it is likely to prove an expensive failure. Its great advantage is that it warms cold air led in flues from without into a chamber behind, from whence it passes again in flues into the apartment through gratings in the walls.

Lavatories and cloakrooms are increasing, though slowly. One of the former I should like to see in every school.

#### *Lincoln District.—Mr. C. H. B. Elliott, Inspector.*

The condition of the buildings is, as a rule, fairly satisfactory. The majority of the more modern schools are substantial in their structure and convenient in their arrangements. The number of schools which one is doubtful about passing in their present condition is extremely small. There were two years ago thirty schools which had not boarded floors; this number is now reduced to about fifteen, and I have reason to hope that in the course of a year there will be very few such remaining. The objection to tiled or brick floors is always met by the well-known argument on the part of managers, that the children are accustomed to them at home. The reply to this is very simple: 1. Children are not required to sit for five hours a day with their feet on a brick floor at home; they are required to do so at school. 2. Their rooms at home are smaller and more easily warmed, and the floor is consequently drier, and there is frequently a piece of carpet or a rug by the fireplace. 3. The school should be made as attractive as possible by being as comfortable as possible. Coughs and colds are more frequent where there is a brick floor than elsewhere, and I find that the teachers appear to suffer even more than the children; continuous standing on a cold floor is very trying for all teachers, especially for women, while a greater effort of the voice is required in these rooms than in others.

Improved means of ventilation have been introduced into many schools; some are still defective in this particular; in others fair means are provided, but are frequently not properly utilised, and sometimes not understood by the teachers. Sufficient advantage is not always taken of the opportunity which the ten minutes' interval in the morning and afternoon affords of thoroughly purifying the room. The air in small class-rooms in winter is often found to be exceedingly impure.

The subject of warmth is one on which it is difficult to speak with great certainty. In schools which happen to be visited only in the summer it is easy to omit to make proper inquiries on the matter. During the last two winters I have often found schools to be very cold, and have heard of many complaints being made by teachers and parents, but these seasons have been so exceptionally severe that it would be unjust to infer that reasonable care was not taken wherever a room was not found to be sufficiently warm. Very frequently the fire is not lighted early enough, and I have heard of cases where the managers grudge sufficient coal. In schools which are constantly visited by the managers such discomforts seldom exist. One of the most comfortable schools in this district is the Barton Wesleyan School, which is warmed by one of Musgrave slow-combustion stoves. The stove is placed in the middle of the room. The smoke and gases are carried up through the roof by means of an ascending flue, after they have passed through the two vacant chambers or secondary stoves which form a part of the construction of the stove. The fire is lighted once a week, and continues burning night and day with coke. The stove is also furnished with a hot-air chamber, which helps to warm the fresh air which circulates through the room. It is easily managed and well regulated, and is thoroughly effective. The absence of dust and smoke, and the little attention it requires, are great recommendations to its use, and the cost in fuel is less than that of



an ordinary fireplace. The fireplace as arranged by Professor Harcourt appears also to provide a very effective means of warming a room.

Light is usually plentiful, but some even of the newer schools are not well constructed in this particular; there is often an unnecessary amount of cross lights, and some schools which should have blinds are not provided with them. Frosted glass might be more frequently used. The girls' sight sometimes suffers from their doing very fine needlework in a bad light.

*Huddersfield District.—Mr. A. P. Graves, Inspector.*

By far the greater proportion of the schools in the district are church schools. There is a large group of them under the Huddersfield School Board's jurisdiction, a large one under the Saddleworth School Attendance Committee, and a larger one still under the Huddersfield Attendance Committee; altogether there are some 130 departments. Most of these are built on the old type, being deficient in classroom and porch accommodation, of unsuitable shape, and too often encumbered with Sunday-school fittings. Where there are classrooms these are generally small and ill-ventilated, the atmosphere suffering still further from the use of badly-fixed old-fashioned stoves, whilst too many of the playgrounds are insufficiently drained and in a very rough condition.

*Warwick District.—Mr. J. D. B. Faber, Inspector.*

Of the improvement effected in the buildings in my district during the last two years I am able to speak with almost unmixed satisfaction. With one exception, the premises are now in almost every case fair, in many very good. Boarded floors have been laid down in place of tiles, classrooms added, entrance porches built, offices improved, and new desks and apparatus supplied. The exception, to which I made allusion above, is the borough of Warwick. The public elementary school buildings in the borough are of a poor character, and quite unsuited to the requirements of the present day. Unless great efforts are made voluntarily I fail to see how the formation of a Board is to be averted. Large additions have within the last two years been made to the borough national schools, but these additions cannot make up for deficiencies in other school buildings within the borough. Moreover, the wisdom of these additions to an already unwieldy school has always appeared to me questionable, and I regret that the sum expended was not devoted to the building of a new group of schools upon a different site.

*Newport.—Mr. E. S. Mostyn Pryce, Inspector.*

To the all-important and difficult question of efficient ventilation I especially commend the various architects' attention. Considering the degree of internal perfection, and often external grandeur, which is reached in school architecture, it is to be regretted the demon of impure air so often reigns supreme.

## HITCHAM AND BILDESTON CHURCHES.

THE annual excursion of the members of the Suffolk Institute of Archæology was to the interesting churches of Hitcham and Bildeston.

At Hitcham the Rev. Canon Grant read a paper, for which information had been supplied by Mr. Pritchett, under whose direction the building had been restored. Canon Grant said that the church evidently belonged mainly to the period of great church building activity in this country—the fifteenth century—and he found no trace of any earlier building. It was, however, to be remarked that the part of the churchyard to the north of the church was evidently a very old burial-ground, very early remains having been found when graves were dug there. That part of the churchyard was not in use when he first went to Hitcham, and it had actually been consecrated by Bishop Turton not very long before, under the idea that it was a piece of ground newly added to the churchyard. For some time no graves were dug there, as there existed in the parish a very common prejudice against burials on the north side, but the south side becoming very fully occupied, he insisted on the graves being dug on the north side, and in every case of a grave being made, very old remains had been found. The earliest part of the present church appeared to be the chancel, which dated from the fourteenth century. That date, however, only applied to the north wall, as the east and south walls were taken down and rebuilt at the restoration, but the style of the original building was retained as nearly as possible. The south wall was very much out of the perpendicular, the east wall was in very bad repair, and the east window was of a very debased style. However, there were found remains of an old east window built up in the wall, and that which was now to be seen in the east end was very much in the style of those remains. The nave belonged to the fifteenth century; the arches, piers, and clerestory were of the early part of that century. The walls of the aisles were probably of the same date, but the windows were evidently later. The tower was probably of early fifteenth century. A remarkable feature in the tower was that its eastern buttresses rose from the floor of the nave and overlapped the western arches of the nave. This peculiarity was also found in Cockfield Church, which had a general resemblance to

this, and there was a still more remarkable example in Bramford Church, where the buttresses of the tower cut off nearly half the adjacent arches. There was an appearance of the buttresses having been at one time exposed to the weather, which would lead to the conclusion that the present aisles were built up to the tower. The roof of the nave was of the fifteenth century, with additions of much later date. The lower part had been mutilated by the defacing of all the figures. It would appear, then, that at the end of the fifteenth century the church externally was much what it was now. Subsequently to that time there was evidently a destruction of all carved human figures, no doubt as being superstitious. It might fairly be conjectured that the ends of the hammer-beams of the roof had such figures upon them, and that they were destroyed. A roof, a good deal resembling it, was to be seen at March, in Cambridgeshire, and there were figures of angels. One or two grotesque figures remained, so that it appeared that only human figures were destroyed. At all events the present ends of the lower hammer beams, which were heraldic devices, were clearly of the seventeenth century—they had the monogram "I.R." on one of them, and also the thistle as well as the rose, showing that it was after the union of the crowns of England and Scotland that the work was done. These were evidence that some interest was taken in the ornamentation of the church during the reign of James I., and a monogram "C.R." in the south aisle showed that the work was continued into the following reign. It would be observed that each heraldic device was surmounted by a coronet, which appeared to be that of the Prince of Wales, and there was in one place a device resembling his plume of feathers. If it was the Prince of Wales's feathers it was a matter of some curiosity what the Prince of Wales had to do with the church. The living was, he believed, originally in the gift of the Bishop of Ely, but came into the patronage of the Crown in the early part of the seventeenth century—he had seen it stated that the date was 1604. But independently of any royal influence there was a way of accounting for the work done at the period in question by attributing it to an incumbent of the parish, whose name he was not able to recollect, who was deprived under the Commonwealth. That incumbent was a man of considerable private fortune, and the donor of the communion plate, the date of which was about 1639 or 1641. The incumbent in question was an eminent man, and it was said that in all probability he would have been made a bishop, but he died in 1659. During the time of the Commonwealth he greatly helped the clergy who were deprived of their livings, contributing from his private fortune. It was quite conceivable that he spent money on the church. He (Canon Grant) did not find that the architect gave the date of the south porch, except that it was later than the nave. It was very like the corresponding porch in Bildeston Church and the north porch of Freston. It was now under restoration as a memorial to the late rector, Professor Henslow, whose family and friends had taken a chief part in raising subscriptions. The history of the church from the Commonwealth to a recent date was that of the majority of the churches of the country—neglect and worse than neglect—alterations supposed to be improvements. The church was seated with carved oak benches of the fifteenth century, and much of the carving was very good. Most of these seats were mutilated for the purpose of being converted into pews. The carved poppy-heads were sawn through to let in the deal sides of the pews. One would have supposed that it would have been less trouble to cut the deal boards, but that was not done. At the restoration of the church these benches had to be removed, being unfit in their then state for use, but all were preserved under the idea that some day there may be the means of restoring them. It was found necessary also at the restoration to remove the lower part of the rood screen, which consisted of painted panels, on which were figures bearing the instruments of the Passion. The figures were too much defaced to be replaced as they are, but the screen has been carefully preserved, and it was a problem not easy of solution how it was to be made suitable for being replaced. He might say that among other things which at the restoration had to be obliterated were mural paintings between the nave arches. One only could be made out, and that was between the second and third arches from the east. There were appearances of colour when the wall was wet; and a friend of his, who had had experience of mural paintings in another church, with very great difficulty removed the outer plaster, and discovered a painting beneath it, showing a very large and fine head. Other traces were found, but nothing that could be made out. The head it was found impossible to restore or preserve, and that he (Canon Grant) really believed was the only thing that was obliterated in the restoration of the church. One part of the restoration was altering the level of the nave to that which it originally was, this being shown by the bases of the piers. As to monuments, there were some very fine stones in the chancel, from which, however, the brasses had been removed. One was a very long one, over ten feet long. With these exceptions the monuments were extremely scanty.

At Bildeston, the Rev. James Beck described the church. At the close of the fourteenth century it was probably a small Decorated one, consisting of a nave and chancel, and a tower of somewhat later erection. The nave and chancel falling into decay, or probably requiring to be repaired, were pulled down, and the



present church raised upon the old site. The marks of the old roof might be seen against the tower wall at the present time. These walls were added, and clerestory windows were put in, and the present roof, which was 48 feet from the beam down to the floor, constructed. When a craze for Perpendicular work set in over the Eastern Counties in the early part of the sixteenth century, the body of the church was pulled down, leaving the tower intact, and it was out of all proportion to the present building. The Decorated windows of the old church were probably preserved and inserted in the new building, two in the side walls of the chancel, and the other three at the end of the aisles. The window at the east end of the south aisle was a Perpendicular one, similar to those in the aisles; but within the last twenty years it was removed, and the present Decorated window substituted. The transomes, which were a characteristic feature of the side windows in the aisles, and of which the marks could still be seen in the mullions, were also removed at the same time—why he could not say. The window at the east end was formerly a Perpendicular one, and one of the finest specimens existing of the period. It has also been swept away, and perhaps the less said about it the better. Within the last fifty years a carved rood screen stood between the first two pillars, and the pulleys for raising the rood were removed in repairing the roof in 1819. The rev. gentleman exhibited the pulleys, and he said he hoped ere long to replace them in their original position. In the north wall is the rood staircase, perfect, but the entrance to it was now blocked up. In order to admit of its construction, the wall was made to project on the exterior. He considered that the roof of this church was somewhat peculiar for a village church, extending, as it did, in one continuous level over nave and chancel. His friend, the Rev. C. R. Manning, however, had that day told him that this was not unusual in Suffolk and Norfolk churches. In all probability the hammer beams were formerly ornamented with carved figures of angels holding scrolls, but about one hundred years ago a man of the name of Welham, a carpenter, of Bildeston, was ordered by the churchwardens to take them down, and burn them as idolatrous images. This was no doubt about the period when Whitfield was so very popular in the Eastern Counties, and very likely the churchwardens were strong disciples. There were twelve clerestory windows on either side, ten over the nave and two over the chancel, but the latter were filled up a few years ago. The miserere seats in the chancel, which were much mutilated, were originally brought here from the chapel of St. Leonard, which once stood in the town, connected with the old Bridewell, afterwards turned into a workhouse, and pulled down some years ago. After they were removed to this church they were used as seats in the north aisle, but were subsequently moved to the chancel, and in restoring the chancel he hoped to utilise them as choir seats. The porch was a very good specimen of Perpendicular work. The lower stages of the buttresses have good flush panelling; the upper stages, niches and good canopies. The arch is within a square head, and over it a good niche, flowered cornice and battlement. The south door, continued the rev. gentleman, is a good piece of Perpendicular panelled work. Over the porch is a parvise or priest's chamber, once lined with iron. The door is a very strong one, with a most complicated arrangement of spring bolts and bars. The staircase leading to this chamber was pulled down in 1878. On the west wall a large fresco painting, representing St. George and the Dragon was discovered, in 1850. These frescoes were thought to be superstitious vanities, and were painted over, and can never be restored. Under the chancel was a crypt, afterwards converted into a burial-place for the Revett family, with an entrance at the east end of the north aisle. The windows lighting the crypt were filled up a few years ago. There are several monumental slabs in the chancel floor, to the memory of the Revett and Beaumont families, William Sparrow and Benjamin Brundish, rectors of the parish, Bartholomew Beale, and Elizabeth his wife, and others. There were formerly several brasses in the nave and aisles, but all of them, with one exception, have been stolen or lost. In the nave there is a brass of a lady, measuring 1 foot 10 inches, affording a good example of Elizabethan costume.

The font is octagonal, of Perpendicular work, with sculptured panels, now much defaced, of the emblems of the Four Evangelists, alternating with angels bearing shields, on one of which is the verbal symbol of the Trinity, the words effaced; on another a chalice with two streams of blood flowing into it; the other two are worn quite smooth. Round the pedestal were eight grotesque figures, as in the font at Barking, of which four have entirely disappeared. In the south aisle is a piscina with elegant double canopy in stone, under a square hood. The chapel in which it originally stood is said to have been dedicated to St. Catherine. The belfry contains a peal of six bells. In conclusion, the Rev. James Beck said there was a portion of the church, at the west end of the north aisle, as to which he should like to have the opinion of gentlemen who were better acquainted with church architecture than he was. It was evident that something existed there, and he should like to know what it was. At the west door of the tower there used to be a porch extending some distance out, but that was pulled down some years ago. He was sorry that there were very few traces of the old church in the way of drawings. He had photographs of the

church as it stood when the old east window was in existence, which afforded a good idea of what the style was. The registers of the church dated from 1558. The communion-plate consisted of an Elizabethan chalice, and two patterns of another chalice of a later date. There was an old pewter flagon which still had a place in the old vestry.—The reports are from the *Ipswich Journal*.

### PROSPECTIVE EXPLORATIONS.\*

IF there were at the present moment in this country a desire to begin a new era of exploration, there would be found no scarcity of eligible scenes where Hellenic civilisation had once flourished. From Greece itself we are practically shut out so long as there is no English institute in Athens gradually to prepare students for the superintendence of work of this kind. For it is now an obvious fact that qualifications which at times have passed in Asia Minor and elsewhere would now be the subject of ridicule under the active criticism of students resident or travelling in Greece. High qualifications are required when the explorer is allowed no right over what he finds except that of being first in the field to explain and circulate its merits. But they may be dispensed with when the sculptures or other antiquities brought to light become a solid possession of the finder or his patron. Here, as elsewhere, England regards possession as nine points of the law. She must therefore look to lands where it is possible. It is possible, but not without difficulties, in Asia Minor, and it is possible in Cyprus without any difficulty.

Except the sculptures of the Parthenon, little has survived from antiquity that can surpass or compare with those obtained by Sir Charles Fellows in Lycia and deposited in the British Museum. Yet he left much of Lycia unworked; and as he left it so it has remained, but for the quite recent expedition of the Austrians. They may be said to have annexed it archæologically for whatever it is worth. At Ephesus the English operations ceased with the clearance of the site of the temple, leaving untouched the deep accumulation of alluvial soil around it. Very possibly on the fall of the temple much of its sculpture had been projected on all sides to a considerable distance, and on this theory it is natural to expect, as Mr. Wood does, that a clearance of the surrounding soil would be attended with fruitful results. He commends his plan of further operations also by the circumstance that the land to be worked on is still the property of this country. Apart, however, from the site of the temple, there must have stood in its proximity many statues and lesser buildings of which remains might still be found, and perhaps there is no better method of reaching them than by proceeding outwards from the temple on all sides. Otherwise a more uncertain prospect could not well be surveyed than the broad flat plain of the Cayster, covering with its deep alluvial soil no one knows what.

On the other hand, there would be no great uncertainty in opening the ancient tumuli of Lydia. From the attempts already made by Mr. Dennis and others, it is hardly to be expected that anything imposing in the way of art would be met with. Yet at the worst the form of construction adopted in these sepulchres would be ascertained, and this would be no small matter in these days, when the history of elementary skill occupies the attention of so many thoughtful persons. Without leaving Lydia there is Sardis waiting to be explored; or, going northward, there is the Troad, whither the successes of the Germans, including Dr. Schliemann, have attracted a small band of Americans, less prepared, perhaps, as yet for excavating than for prospecting. Even well into the interior are many sites calculated to repay favourably the increased cost of advancing upon them. In every case there will be, besides expense, many vexatious difficulties.

When General Cesnola had completed his excavations in Cyprus, the vast quantity of antiquities he had obtained encouraged a belief that he had fairly ransacked the island. But this belief was soon after dispelled by the arrival of Major Cesnola with another huge collection, said to be in many respects of great importance, though hardly rivalling that of his more fortunate brother. General Cesnola's services to classical archæology are justly reckoned as of the first order. Other explorers of Cyprus in times past have met with no startling fortune, and so far have contributed to the prospects as they now stand an element of uncertainty. The tombs may be relied on for quantities of common pottery, specimens of which already abound in museums and even in private collections. With this it would not be easy to deal. At the same time there are many parts of the island not yet explored, and from them it might reasonably be hoped that the tombs would yield occasionally a higher class of vases, which would repay the search and redeem the character of the ancient Cypriotes in respect of this branch of art. It is not as if they had altogether neglected it, and, like the people of Tanagra in Bœotia, taken rather to terra-cotta statuettes for the furnishing of their tombs. On the contrary, the Cypriotes would seem to have been as distinguished for the quantity as for the commonness of their pottery, unless by experiments in new localities matters assume a

\* From a paper by Mr. A. S. Murray in the *Nineteenth Century* for September.



different complexion. As yet most of our specimens have come from one district, and exhibit none of that love of artistic enrichment which carried the Greeks so far beyond consideration of the intrinsic value of the article operated on. The clay of a vase seemed at the outset a poor substance for the Cypriote, and he cared little apparently to refine it.

The sculpture no less than the pottery is largely pervaded by a dense commonness of skill as well as of material. Yet exceptions like the two splendid marble sarcophagi found by General Cesnola raise the hope of obtaining examples of this art which would make us independent of New York when we have a mind to study this subject. For the history of architecture in Cyprus almost nothing has been done, though the field of inquiry is extensive and apparently not costly to work. There need be no expectation of marvels in design and construction. The most to be hoped for would be evidence of many forms of transition between Oriental and Greek methods of building. The antiquities of Cyprus have already proved a key to more than one mystery. They are not things of average beauty and attraction that appeal to the cultivated classes generally. They are peculiar, and appeal to the special student.

It would be unjust to conclude without acknowledging the intelligence, zeal, and liberality of the Greeks themselves in the conduct of explorations, such for example as those at Spata and Epidaurus. For several years they have been making preparations to excavate at Eleusis, where they have been obliged to build a new village for the inhabitants whose houses it will be necessary to pull down. At Tegea in Arcadia they have the prospect of heavy expenses before they can hope to uncover the famous temple built there, and sculptured also by Scopas. The modern village of Piali is built above it. But their most pressing undertaking is doubtless at Olympia, where they have inherited the task which the Germans left incomplete; a large district still remains deeply covered with alluvial soil. It is an outlying district, where there cannot be much hope of important rewards, and we are therefore bound to sympathise with the Greeks in finding this vast amount of labour and expense, so to speak, thrust on them. It is for this reason that the search for them cannot be delayed now without injury.

## THE LIGHTING OF PUBLIC LIBRARIES.

A PAPER was read by Mr. P. Cowell, of Liverpool, on the Electric Light in Public Libraries at the Conference of Librarians. His observations were mainly based upon his experience at the Liverpool Library and Picton Reading-room. He spoke with regret of the destruction of books going on in public libraries through the excessive heat and noxious atmosphere consequent on the use of gas for lighting purposes, and also looked at the lighting question as one affecting the comfort and health both of readers and officials. In Liverpool they were trying several modes of protecting the books from the effects of the gas, such as varnishing, binding liberally in buckram, &c., societies' Proceedings, specifications of patents, &c. When gas was used the temperature invariably rose during the evening to an injurious extent; and to open doors and windows was productive of colds, and brought remonstrances from readers. The Picton Reading-room was circular in form, 120 feet in diameter, 60 feet in height, and the books were arranged around the walls, while the table was in the middle. It had been lighted for some time past by three arc-lights placed on a central pedestal, and within an opaque glass shade, the shape and position of which was that of a large bowl or inverted umbrella. The thermometer readings showed that whereas when gas was used the temperature rose between 4 P.M. and 10 P.M. as much as  $11^{\circ}$  in the lower part of the room and  $13^{\circ}$  in the gallery, with the electric light it rose but  $2\frac{1}{2}^{\circ}$  below, and in the gallery actually fell  $2^{\circ}$  in the period mentioned. One of the most pleasing advantages of the electric light was that persons whose only spare time was in the evening, and who found a delight in sketching, illuminating, &c., from originals at the library, could do so by its rays. Then there was the advantage of freedom from danger of fire, provided the wires and other accessories were arranged and controlled by competent persons. In regard to cleanliness there was a great advantage, and periodical cleanings were less frequently required. The vitiation of the air caused by gas was entirely absent, and the members of the library staff consequently retained a feeling of cheerfulness and freshness almost to the close of the day's labour. He could not speak so enthusiastically with regard to the expense, but that had been greater in this case than it would be at the present time, because they at the Liverpool Library had been somewhat unfortunate in that respect; but he did not hesitate to say that in libraries in the large towns, having in view recent improvements in the mode of lighting, the arc electric light could be made to pay directly.

During the subsequent discussion Mr. Frost alluded to the danger of fire which arose where the light was badly installed, by persons who were unqualified for the work. He recommended the incandescent in preference to the arc system.

Mr. Sanders said the Royal Academy had discarded the incandescent light as a failure, and returned to gas, as the former gave a reddish light. The incandescent light did well for small rooms.

Mr. Walford testified to the advantages of the electric light as installed at the Picton Reading-room.

Mr. Garnett, of the British Museum, spoke of the benefits consequent upon the introduction of the electric light into the Museum reading-room, which was now open until 8 P.M. instead of 4 P.M. in consequence.

Mr. C. W. H. Wyman contended that the real question was as to the cost of the electric light as against the cost of gas. The City had been lighted by all the leading systems, with the result that the authorities had resolved to discard them all; at present the electric light cost four times as much as gas.

Several other speakers in their remarks pointed out that the arc lamp was the one for open spaces, and the incandescent lamp the one for rooms and places where there were book-stands or other objects to throw shadows.

## CHURCH BUILDING AND RESTORATION.

**Crieff.**—A new Free church, the plans for which were prepared by Mr. J. J. Stevenson, of London, and Mr. R. Ewan, of Glasgow, has been opened. The plan follows that of Dunblane Cathedral, having tower, spire, and windows of similar construction. The building is seated for 860 persons, and has cost about 5,500/. The contractors were—Mason-work, Messrs. Donaldson & Son, Crieff; joiner-work, Mr. Peter M'Gregor, Crieff; plaster-work, Messrs. Christie & Sons, Crieff; slater-work, Messrs. T. & J. Philips, Crieff; plumber-work, Mr. C. Anderson, Crieff; painter, Mr. Jas. Armstrong, Crieff; heating, Messrs. Comb & Sons, Glasgow; glazier-work, Messrs. Adam & Small, Glasgow.

**Loftus-in-Cleveland.**—A new Catholic church, built from the designs of Mr. Martin Carr, of Middlesbrough, by Mr. Dickinson, builder, of Saltburn, has been opened. The church, which is dedicated to St. Joseph, is built of brick, with stone and terra-cotta dressings, comprises nave, sanctuary, and sacristy, and provides accommodation for 300 persons.

**Horrabridge.**—A Bible Christian chapel has been opened about a mile from Horrabridge. The building is erected of stone in plain Gothic style, and was designed by Mr. James Crocker, architect, of Exeter. The work has been carried out by Mr. Blowey, of Mutley.

**Long Marston.**—The corner-stone of the new church of All Saints has been laid. The nave and chancel walls are half built, and the aisle has been begun. Messrs. Carpenter & Ingelow are the architects. The builder is Mr. Fincher, of Tring; the mason, Mr. Lingard, Berkhamstead; joiner, Mr. Smith, Tring; and the clerk of works, Mr. F. E. Smith.

**Crowle.**—The parish church, which has been rebuilt from the designs of Mr. Preedy, architect, has been reopened. The building, though enlarged, has been restored upon the old lines. The edifice is cruciform, and the style is Early English, with Norman chancel. All the old materials have been used as far as practicable in the rebuilding. Interesting features of the old fabric—the old Perpendicular porch, with its carved woodwork, the best of the old windows, the south transept roof, and the Purbeck marble lectern of the twelfth century—have all been re-erected in their proper places. Local stone has been used in the extended walls, with Ombersley stone dressings on the outside, and Bath stone dressings in the interior. The work has been done by Mr. J. Inwood, builder, of Malvern.

**Darwen.**—The foundation-stone of a new church, to be dedicated to St. Edward, has been laid. It will be built of local stone, in Gothic style, from the designs of Mr. Simpson, of Bradford. Accommodation is to be provided for about 400 persons.

**Northampton.**—The old chapel of St. John's Hospital has been restored, and was lately reopened for its pristine purpose by Cardinal Manning. The work has been carried out by Mr. Anstey, builder, under the direction of Mr. Nicholl, architect, London.

**Maidstone.**—A Wesleyan chapel has just been opened in the West Borough. It is built of Kentish rag stone, with Corsham Down and Box Ground stone dressings, the style being Gothic of the Early English type. In the rear, and communicating with the chapel, is a schoolroom and an infant classroom with folding doors between. There is also a classroom and a minister's vestry. Accommodation is provided for about 400 persons on the ground floor, and provision is made so that galleries can be added, if required, at some future time. The seats and pulpits are of stained and varnished deal. The ventilation is provided for by means of upright inlet shafts and a Boyle's patent extractor on the roof, the latter being enclosed in a turret 20 feet high above the ridge. The architects were Messrs. Ruck, Son & Smith, of Maidstone. Mr. R. Avar was the builder.

**Revelstoke.**—The new parish church has been opened. The style of the building is Perpendicular, the materials being a local dun stone relieved by grey Dartmoor granite. The plan comprises nave, north and south aisles and a north-west porch. The site sloping, a vestry and crypt has been constructed under the south aisle. Mr. J. P. St. Aubyn is the architect.



## SCHOOL BUILDINGS.

**Halifax.**—The building erected between Prescott Street and Oxford Road, as a Higher Board School, has been opened. The school, designed in Queen Anne style, consists of two storeys, and is built of local stone. Mr. Richard Horsfall, of Halifax, is the architect, and the contractors were:—Masons, Messrs. Charles Bolton & Co.; joiner, Mr. J. Smith, Stannary; plumbers, Messrs. Stafford & Son; slaters, Messrs. Rushworth & Firth; painter, Mr. Marshall; heating apparatus, Mr. King, of Liverpool. The school is to accommodate 560 children, and the total cost, apart from site and furniture, is about 6,000*l*.

**Birmingham.**—The contract for the erection of the Princess Alice Orphanage has been let to Messrs. J. Wilson & Sons, of Handsworth, and the foundation-stone will be laid on the 19th inst. The site is on the Chester Road, facing which will be a block of connected buildings nearly 250 feet in length, consisting of the master's house, the offices and board-room, the belfry and great hall, the kitchens, store-rooms, bakehouse, and kitchen offices. Behind the administrative buildings, on the right hand and on the left, the cottages or "homes" will be placed at intervals. When complete there will be twelve cottages for boys and twelve for girls, each providing accommodation for about twenty-five children, together with matrons' rooms. These farm-cottages will stand detached in separate plots of ground, and will be of different designs. Schools, workshops with facilities for carrying on about a dozen industries, baths, farm buildings, and a farm bailiff's house, will be built in various parts of the estate; and the whole will be completed by a suitable chapel. The architect is Mr. J. L. Ball.

**Aston.**—At the meeting of the Aston School Board on Tuesday, the chairman, Mr. Stone, stated that it was the custom at the commencement of each new year of office to sum up the work effected. One school had been opened during the year in Lozells Street, providing 1,015 additional school places, and this brought the Board-school accommodation in the district under their charge up to 8,461 school places. In 1875 there were provided 4,043 school places by public elementary schools, 2,616 being by Church of England schools, 575 Roman Catholics, 766 Wesleyan and British, and 86 efficient private ones. At the close of their official year—July 1882—there was accommodation for 12,092 children, an increase of 8,049 in seven years, 8,461 being provided by Board schools, 2,756 by Church of England, 579 by Roman Catholic, and 300 by Wesleyan, the decrease shown between 1875 and 1882 in the Wesleyan and British school accommodation arose from the Gower Street and Erdington schools having been transferred to the Board, and were now included in the returns of Board schools.

## NEW BUILDINGS.

**Otley.**—New Sunday-schools have been built at Otley. The schools are in plain Gothic style, built in a substantial manner of idle wall-stones, with local ashlar dressings. The large school-room is 73 feet 6 inches by 31 feet. The entrances to this room are by two porches in the front, and four classrooms, average 14 feet by 16 feet, are arranged on the south side of it, with communications to each from the large room. The inclination of the ground has enabled the architects to obtain under these classrooms a large room (53 feet by 14 feet), intended for use of boys; also a tearoom, which may be used as an additional classroom if required. An internal staircase connects the two floors, and an outer door is provided for lower rooms, level with yard. The large room is calculated to seat, when used for concerts or entertainments, nearly 600 people, and is exceedingly lofty, and provided with Boyle's patent air-pump ventilators. The works have been carried out under the superintendence of Messrs. Fairbank & Wall, architects, of Bradford and Otley; and the contractors have been as follow:—Masons, Cordingley & Wildman, of Idle; joiner, Wm. Hartley, of Ilkley; plumber, Squire Farrand, of Otley; plasterers, J. & W. Chaffer, of Otley; slater, James Smithies, of Bradford; and painter, G. R. Foster, of Otley. The iron railing and gates have been provided by Exley & Sons, of Otley.

**Sittingbourne.**—A hospital for treatment of infectious diseases has been opened by the Sittingbourne and Milton Joint Hospital Board. The work has been carried out from the designs of Mr. W. Leonard Grant, of Sittingbourne. The hospital is erected on a site at Keycolhill, about four acres in extent, given by the late Mr. G. Smeed, and the estimated cost of the whole was 5,000*l*. The building is intended to provide accommodation for twenty-four patients in eight wards, contained in two pavilions connected by open corridors, 6 feet in width, with a central administrative block. The Local Government Board require the provision of 12 lineal feet of wall space, 144 superficial feet of floor space, and 2,000 cubic feet of air space for each bed, and these figures have been strictly adhered to, except the last, which has been slightly increased by carrying the ward ceilings some distance into the roof. The four small wards have been provided partially for the use of private patients and also as convalescent rooms when not otherwise engaged. The whole of the buildings are lighted with gas,

and communication between the different blocks is provided for by electric bells. At the rear of the administrative block is situated a range of buildings containing washhouses, disinfecting chamber (fitted with a specially made gas disinfecting apparatus), laundry (with slow combustion ironing stove), and ambulance house, and behind these buildings is situated a detached mortuary, fitted up with slate shelves. Special attention has been paid to the drainage arrangements, which are carefully cut off from the interior of the buildings, all pipes being made to discharge in the open air with a short length of surface gutter leading on to a Lean's patent gully. The buildings are erected of local bricks, the walls being built hollow to prevent penetration of damp, the gables being hung and the roofs covered with Hollingbourne plain tiles secured by metal pins.

## ARCHÆOLOGY.

**Excavations at Pompeii.**—The Naples correspondent of the *Daily News* writes:—The last house excavated at Pompeii in Isola V., Regione VIII., is of an anomalous kind. It is situated at the south side of the isola. Its construction is quite unusual, as it possesses no proper atrium. On entering the doorway you find on your right a small stove in the corner of the passage, and on the left is the kitchen proper, with a room for slaves. Then to the right is a row of columns, forming a rectangular space, in the midst of which is the triclinium with the reclining bed formed of masonry, and in the centre a cylindrical table covered with slabs of marble geometrically arranged. The wall-paintings of this open space are not of great value; there are heads of Medusa, hippocorpi, and fantastic birds. Returning into the passage, there is on the left, next to the kitchen, an exedra with walls ornamented with white and yellow squares, divided by columns, decorations, and festoons, all in fresco. At the entrance of this room are two strange figures; on the left an infant surprised at the sight of a large rat issuing from a trap, and on the right the same infant trying to catch the rat. On the left wall is a medallion with a small figure, two cupids, and two flying geniuses, one with a pastoral staff in the left hand and a bunch of grapes in the right, the other with the staff in the right hand and the left hand supporting a basket on the shoulder. The opposite wall is in a bad condition, so that nothing can be distinguished but the faint traces of a similar medallion. This room was covered, and above it and the kitchen was a second storey, to which access was had by a staircase at the end of the ground-floor passage and by a similar passage above. Behind the exedra (always to the left of the passage) comes an enclosed garden. A window into this garden gave light to the staircase. At the extreme end to the right is another small room, with a window opening into the triclinium. This room had another above it, and the sole connection between this upper room with the others on the left was by means of the passage on the second floor. Many vases, shells in bronze, several gold rings with engraved stones, and amphoræ were found in this house, and six skeletons. A walled-up door on the left wall of the exedra makes it probable that the house was once a portion of some other larger dwelling, and that it, like so many others, had been sold separately and undergone various changes.

## ENGINEERING WORKS.

**The Drainage of the Fens.**—Mr. W. Rigby, of Worksop, the contractor for the new works at the Grand Sluice, Boston, has just commenced operations. The present Grand Sluice was built a little over a century since. The foundation-stone was laid by Mr. C. Amcotts, on March 26, 1764, and it was opened by the engineer, Mr. Langley Edwards, on October 15, 1766. At the time of its erection the sluice was looked upon as a work of great magnitude. Its capacity of clear waterway is 50 feet wide, with three pairs of doors pointing to the seaward, to shut with the flow of tide. A fourth opening was built by the Navigation Commissioners, whose rights were purchased by the Great Northern Railway Co. Each of the archways is furnished with drops or draw-doors on the land side, which are shut occasionally, in order to retain fresh water in dry seasons for the use of cattle and for navigation purposes. The top of the draw-doors is gauged to such a height as to retain the water of the river not higher, at ordinary seasons, than two feet below the medium surface of the lowest lands. Some of the leading engineers of the present century have pronounced the sluice to be a great impediment to the drainage, and by stopping the tidal waters it has caused the haven of the Witham to silt up, and neutralised the scouring action of both fresh and sea water. The works now in progress are undertaken by the General Commissioners for Drainage by the River Witham, by virtue of an Act of Parliament passed in 1881, by which the Commissioners are empowered to spend 50,000*l*. on the improvement of the river between Boston and Bardney and the enlargement of the Grand Sluice. The contract for the latter part of the work amounts to 9,932*l*. The work undertaken is an additional archway with a sill about four feet lower than the existing outlets.



## GENERAL.

**Mr. G. G. Hoskins, F.R.I.B.A.**, has prepared designs for new printing and publishing offices for the Northern Counties Constitutional Newspaper Company (Limited), to be erected in Crown and Quebec Streets, Darlington. The work will be proceeded with at once.

**Sir J. A. Picton** has been selected as President of the Conference of Librarians to be held in Liverpool in 1883.

**Messrs. Taylor** have cast the new bell for Manchester Town Hall. The metal consists of thirteen parts of pure copper to four parts of tin. It will bear the inscription, "Ring out the false, ring in the true."

**Mr. F. R. Wilkinson** has placed at the disposal of the Ancoats Recreation Committee about 100 drawings and pictures, for exhibition during the month of October. The drawings will comprise some examples of the early water-colour school, about forty, by the late William Hull, of Oxford and Cambridge, and a series of Spanish subjects, not hitherto shown, by Mr. E. Bancroft. The oil-paintings include Mr. Madox-Brown's large picture, *Wycliffe Reading his Translation of the Bible to John of Gaunt*.

**A Design by Mr. T. Lewis Banks** has been adopted by the committee of the West Cumberland Liberal Association, for the new hall, clubhouse, post-office, shops, &c., at Workington.

**The Bishop of Bangor** on Tuesday opened a church which has been erected at Towy as a public memorial to the late Mr. W. R. M. Wynne, the Welsh archaeologist and antiquary, who for many years represented Merionethshire.

**The Earl of Egmont** has given 1,000*l.* to the Dean and Chapter of Cork to erect vestries for the clergy and choir of the cathedral.

**Mr. W. Herbert Johnstone**, of the Manchester Academy of Fine Arts, has been commissioned to paint a presentation portrait of Mr. Robinson, several years a member of the Swinton and Pendlebury Local Board.

**Mr. Hope Johnstone**, the hereditary keeper of Bruce's Castle, Lochmaben, has intimated his consent to an opening up of the inner fosse of the castle, which runs to the loch on each side of the peninsula. When the castle was dismantled by the Government of the day, after a Jacobite gathering in 1774, the outer fosses seem to have been completely filled up, but the inner one was never entirely filled, and the portion immediately in front of the castle ruins still contains a considerable depth of water. It is expected that numerous interesting relics will be found.

**The Dean and Chapter of Ripon Cathedral** have taken measures to improve the architectural appearance of the cathedral from the west by removing a large block of buildings situated at the north-west corner, which will have the effect of bringing into view the whole of the west front in approaching from Kirkgate. The roadway along the north of the cathedral will be improved, and trees and shrubs planted near the wall.

**Mr. Joseph Pettitt**, the artist, died at his residence, Balsall Heath, Birmingham, on Saturday last. Mr. Pettitt painted a considerable number of views of Swiss scenery for the late Mr. Joseph Gillott, of Birmingham.

**The Mayor of Hereford** has been presented with an official hammer, made from a piece of oak from the Old Town Hall, built by Abell in 1620, and pulled down in 1862.

**Messrs. H. Shearer & Co.** have obtained two important contracts—one from the Trinity House for the supply of granite for the new Bishop's Rock Lighthouse, and the other from the Admiralty, for a dock at Haulbowline. It will be remembered that all the stone for the new Eddystone Tower was supplied by Messrs Shearer in six months less than the contract time.

**The Cathedral of Providence**, Rhode Island, is to have 122 stained-glass windows, for which an order has been given to the Tyrolese glass-painters by Mr. P. Keely, the architect.

**Mr. J. Riddell** is engaged on a life of the late E. H. Baily, R.A., the sculptor.

**The Dawlish Local Board** have approved of a committee recommendation advising the acceptance of an offer from Messrs. Bayley & Sons, of Poole, to light the town with mineral oil, subject to a trial proving satisfactory.

**The Manor House, Everleigh**, in Wilts, belonging to Sir John D. Astley, Bart., which was burnt down at Christmas, is being restored, under the supervision of Mr. Birch.

**The Yarmouth Town Council** have decided not to demolish the old Town Hall. It is to be retained with a view of its being utilised at some future time for a museum, or some such other public purpose.

**The Hundred of Hoo Railway**, a short line connecting the North Kent section of the South-Eastern Railway with the new port called Port Victoria, near Sheerness, was opened on Saturday.

**The Kilmarnock Masons.**—At a meeting of master builders, held on Monday evening, it was unanimously agreed that the standard wages of the workmen, from and after that day four weeks, should be reduced from 7*d.* to 6½*d.* per hour, and, further, that the hours of labour be ten per day, or fifty-seven per week, instead of fifty-four as at present.

**The Social Science Congress.**—The inaugural address of the president (Mr. G. W. Hastings, M.P.) will be delivered in the Mechanics' Large Hall, Nottingham, on the evening of Wednesday the 20th inst. The presidents of the different departments will deliver addresses in the same hall at 10 o'clock on the mornings of the following Thursday, Friday, Saturday, Monday, and Tuesday respectively, and the sectional meetings will take place an hour later on each day in the University College. The concluding meeting will be held in the Mechanics' Hall at noon on Wednesday the 27th.

**The Birmingham and Midland Institute Lectures** will recommence on November 3, with an address from Mr. J. A. Froude. A course of lectures on "Decorative Art" will be given by Mr. J. H. Chamberlain. In the archaeological section papers are to be read by Mr. J. A. Cossins, Dr. Langford, Mr. W. G. Wetton, Mr. Sam. Timmins, and Mr. Edwin Smith; the subjects being the excursions made by the section in 1882, illustrated by Mr. John Cotton; Birmingham at the time of Leland's visit; St. John the Baptist's Hospital at Coventry; Old Birmingham Books; and Wootton Wawen Church.

**A Committee** has been appointed to report on the possibility of lighting the city of Bath by means of electric light.

**The Cardiff Public Hall Company** have instructed Messrs. James, Seward & Thomas, architects, to obtain tenders at once for the erection of the new buildings and the adaptation of the present block (Queen's Chambers) to hotel purposes. The company propose to complete and open their hall before the holding of the National Eisteddfod at Cardiff in 1883.

**The Beriot Theatre, Louvain**, was destroyed by fire on Monday last. The loss is estimated at 200,000 fr.

**The Leamington Town Council** have received a letter from Messrs. John Parnell & Son, builders, Rugby, complaining that their tender for the new Municipal Buildings was not accepted, although it was the lowest, and adding that the mere fact of their tender not being accepted under the circumstances was calculated to have a very injurious effect upon their position as builders. The letter having been read, it was stated that the contract was given to Mr. Fell on account of his being a local man, and that no reflection whatever was intended on Messrs. Parnell & Sons.

**The Leeds Architectural Society** on Saturday afternoon last visited Halifax. The party were met at the station by Mr. John Leeming, of the firm of Leeming & Leeming, architects, &c., Halifax, and conducted over the principal parts of the town. Amongst the buildings visited were the parish church, recently restored by Mr. Scott at a cost of about 20,000*l.*; Squire Road Congregational Chapel, recently restored by Messrs. Leeming; the Higher Board School, Prescott Street, erected at a cost of about 6,000*l.*, from plans by Mr. R. Horsfall, of Halifax; Heath Grammar School, erected at a cost of about 10,000*l.* by Messrs. Leeming; Haugh Shaw Board School, also by Messrs. Leeming, and which cost about 6,800*l.* The town hall was the last building visited, when the opportunity was taken on the part of the visitors to express their thanks to Mr. Leeming. It is the intention of the Society to again visit Halifax, as many buildings were necessarily left unseen owing to the shortness of the visit.

**The Birmingham Architectural Association** made one of its periodical archaeological and sketching excursions on Saturday last. Visiting first Solihull, the party walked to Berry Hall—a charming example of a moated half-timber house; thence to Escote Hall—another larger, more elaborate, but much-restored example of half-timber work. Journeying still brought them to Wharley Hall, also of half-timbered treatment. Barston Church was next passed. It is a red-brick building, erected when architectural art—if art existed—was at its very lowest ebb, and would probably be denominated as being in the "Queen Anne" style. Leaving Barston the party came to the village of Hampton-in-Arden, and viewed the fine old church and the charming and picturesque modern cottages, after which they returned to Birmingham.

**Leek.**—On Monday the foundation-stone of the Nicholson Institute was laid. The building, which will cost in all some 20,000*l.*, will combine a free library, art gallery, museum, and school of art. The structure is being erected by Mr. Inskip, builder, from the designs of Messrs. Sugden & Son, architects, of Leek. The building is a gift to the town, and the stone was laid by Mrs. Nicholson, wife of the donor, Mr. Joshua Nicholson, head of the firm of Messrs. Brough, Nicholson & Co., silk manufacturers, the largest employers of labour in the town. The building will take two years to erect.



# The Architect.

## THE OFFICIAL CONTROL OF BAD BUILDING.



WHEN a new metropolis for the ancient world was created by CONSTANTINE out of the town of Byzantium, although all the resources of imperial revenue and the authority of despotic power were at the disposal of the builders, a good deal of their work, it is said, was so very indifferently constructed that in the succeeding reign fears were seriously

entertained lest a good deal of it should come down with a run. In the chief metropolis of modern empire the course of building proceeds so far at least on a similar footing that, if the successor of Queen VICTORIA should enjoy a lengthened reign, there is a considerable proportion of the town which may very likely in his day come tumbling about the ears of the citizens in a way to scandalise the world.

Any one who, in passing about London by some of the lines of railway which overtop the houses, feels disposed to look a little narrowly at the picture below, can scarcely fail, even if he be but a poor judge of building affairs, to be astonished. He will see a good deal of squalor, damp, smoke, and dirt; but let us suppose the weather to be at its best and none of these characteristics too prominent. He will see poverty; but let him pass over that with the customary and comfortable reflection that the poor we have always with us. He will see—and if it be pointed out to him by a fellow-traveller, perhaps, who can read beneath the surface of the scene, he will find it much more notable than he expects—an interminable wilderness of houses, the very flimsiest, as it appears to be, in brick walls and tiled or slated roofs, that human ingenuity can well contrive to set up so as to stand for a time and not instantly collapse. Let the observer go even into other quarters, and better; and when it is no longer the rows of dwellings of the very poor which he sees, but the neat semi-detached villas of the middle classes, and their terraces of “superior family residences,” the case is often very much the same, and the fractured walls, after an existence of what is obviously only a very few years, too often tell the tale of decrepitude as plainly as in the worst parts of the town. Why, he will ask, should this be so? Can it be the interest of men of business to build houses which are so palpably unsubstantial? And, if it can be so, is there no officer to control such building in the interest of the public?

To these two questions the answers are, so to speak, simple enough and yet not so simple. As a financial principle, we may reply, it is assuredly not to the interest of the builders to build so badly as many of them—we ought, perhaps, to say most of them—are so prone to do. But if they will persist in so doing, there is, we may add, in this free country no constituted authority by means of which they can be prevented. These are the simple answers. But we may with equal accuracy reply in another sense, it unfortunately is the fact, and cannot be disguised, that a certain kind of self-interest, arising out of a perversion of financial policy in desperate circumstances, does compel builders, by the sheer force of necessity that knows no law, to scamp their work to the uttermost; but we may go on to add, with regard to the question of control, that a kind of authority appears at this moment to be gradually springing up, by means of which it is to be hoped, and indeed expected, that a very considerable improvement in the quality of the lower modes of building will in course of time be brought about compulsorily.

On the financial point a very little explanation may suffice, inasmuch as the circumstances are notorious. When a speculation builder—who of course is the house-manufacturer of every-day business—happens to possess both capital and brains sufficient for carrying on his operations confidently, respectably, and therefore somewhat liberally, he recognises clearly enough the force of the maxim of trade, that a good article alone can command a permanent market and produce reliable profits. Accordingly, he will be found to build, if not always thoroughly well, at least very much better than many others. But when these others are questioned, and the details

of their transactions laid open—perhaps in the Bankruptcy Court—it is found that they have occasionally a little money and no brains, but more generally a little brains and no money. In the latter case especially they are in reality very poor struggling men, whose only means of getting what is almost literally daily bread is to keep their work constantly going—going anyhow—and to squeeze what they can out of it by splitting halfpence. Such men have no commercial character to keep them upright—like BENJAMIN FRANKLIN'S empty bags, they find it hard, perhaps impossible, to stand erect at all; and if they can by any means satisfy the solicitor who lets them the land and finds them the money (whose personal policy it is to be easily satisfied), and can contrive, with his help, to sell somehow or other, and almost at any price, in time to keep accounts running, they allow the virtues to look after themselves, and are content to live. Such operators necessarily produce very bad building as a rule; and, what is worse, they in a great measure determine, owing to their numbers, the general tone of the philosophy of speculation building throughout the town. We are glad to hope that their example is being more frequently disregarded now than it used to be, and that even in their own persons some of them are venturing out of the old line into a course that is better in the end for all concerned; but the fact remains, that they have in years past covered miles of good metropolitan land with mere rubbish of building, and we cannot help adding that they are still covering other miles in the same way.

It is for such reckless practitioners as these that building regulations are primarily made part of the law of the country; and hence arise such statutes as the Metropolitan Building Acts, which have been in force for a great many years. It is well known that there are some sixty experienced architects employed in the daily work of administering the provisions of these Acts in London, under the name of district surveyors; and, judging by the fact that they receive in the aggregate thirty or forty thousand pounds a year for their services, besides incurring a large amount of odium, they ought to have a good deal to show for the money. All depends, however, obviously enough, upon what it is that the Acts enjoin or authorise them to do.

Now any one who appreciates aright the policy of English law when directed to the restraining of private business will perceive at a glance that the only standard which the Building Act can really profess to set up in this country is what may be called a minimum of stability; and, accordingly, it is well understood that the metropolitan building regulations represent in effect the lowest scale of substantiality that is safe for occupants and passers-by—we might otherwise call it the utmost degree of unsubstantiality that the people at large can be advised to tolerate, even when making as little fuss as possible about their own life and limb. When we observe that a brick wall 9 inches in thickness in an ordinary dwelling-house is actually allowed to extend to the limits of 30 feet in length and 25 feet in height, most of us will admit that this indicates a sufficiently low standard of stability to satisfy the most benevolent philosophy; and when we take the responsibility of adding that such a wall has often, very often, been built of bricks little better than dust, with mortar little better than mud, the reader may be as indignant, or not, as he pleases. Then as regards other matters, such as the adequacy of the strength of timber-work in floors and roofs, we may simply explain that there are absolutely no legal regulations at all to restrict the exercise of economy.

It is unnecessary to repeat the suggestion that houses of the kind which we thus indicate are not likely to stand long; and if the reader should begin to reckon up the vast number of such houses that have been built in London within the last fifty years or so, the very awkward conclusion will be forced upon him that a considerable proportion of the newer or younger parts of the town must already be looked at as dangerous. This, however, we will allow to pass, in order to inquire whether the power of the law is coming in any way to be of more avail against the perpetuation of such a state of things.

We are glad to think it is. In England the law may be said to have a happy knack of adapting itself to the growth of intelligence. Without altering the statute, public opinion seems to cause its interpretation to be altered; and this process, we think, is at the present moment going on with reference to building law. Some of the district surveyors, beginning to perceive that they ought to be guided by



considerations of public progress and public complaint, are said to be a good deal more "strict" than they or their predecessors used to be; and we regard this as a commendable circumstance. In fact, building law is so difficult to the lawyers at any time, that, if official architects will be firm, and of course conscientiously so, in an endeavour to make common sense of it rather than technicality, the legal authorities to whom an appeal may lie will always be found disposed to support such a policy; and it may certainly be affirmed without danger of contradiction that, however much the genius of English legislation may hesitate to interfere with private business, the intention of the Legislature in matters of this kind could not possibly be to encourage bad building, or in any way to sanction such building as will in fifty years become dangerous. Accordingly we will go so far as to recommend the public officers to be even more strict than they are in requiring honest and sound construction, whether (so to put the case) there be law for it or not. It is a disgrace to all England to see such work as is common in London, and it cannot be doubted for a moment that the intention of Parliament is to put a stop to it, and has always been so upon every occasion when the question has come under discussion.

One argument that may be allowed much weight is that coroners' juries have been found to be very unwilling to exonerate public surveyors—or even private surveyors, as witness a recent case—from what they regard as the responsibility to common sense distinguished from statute law. What we deduce from this consideration is that public opinion is in advance of the letter of the law; and if, as we have said above, the progress of public opinion constitutes the spirit of the law, then the public surveyor should stretch his authority in the interest of sound building as not only his duty but as his interest. Nor must he flinch at the odium; a surveyor or supervisor of any kind who does his duty manfully must not expect to be a popular favourite; and, if the speculation building of London is to be improved, this certainly cannot be accomplished by amiable concessions to the private interests of offenders.

It is especially worthy of remark that the building regulations which are now being established in provincial towns and districts under the Local Management Acts are being administered in many cases with a vigour which is unknown in the metropolis. No doubt there is an outcry occasionally, but that cannot be helped; and what we venture to say, in view of the shameful state of common London building, is that the Legislature and the better classes of the public would not be sorry to see the same outcry raised in many quarters of the metropolis also.

## WATTEAU.—II.

(Concluded from page 170.)

THE marvellous rapidity with which WATTEAU composed was almost a matter of regret to his friends. Once the idea of a picture occurred to him, he was nervous and impatient until he had put it on canvas. It was this impatience which led him to the unsparing use of some materials which GERSAINT, DE CAYLUS, and MARIETTE are unanimous in deploring. They attribute to it the fact that some of his charming paintings had already lost even in their day much of the brilliancy of their tone. It is remarkable that WATTEAU took greater delight in drawing than in painting, perhaps because by means of his pencil, pen, or crayon, he expressed his conception more rapidly on his favourite *papier chamois* than by means of his brush on canvas. Once a crayon was in his hand it was only by an effort he returned to his easel. His sketches were chiefly executed in red crayon, a vehicle he specially affected, partly because with it he easily obtained the reverse of his design, and partly because of the warmth of its tone. He used a "sanguine" which cannot be procured in these days, and as he heightened it with touches in black and grey, its tone assumes almost the richness of carmine. M. DE GONCOURT believes that he procured his supply of red crayon from England. A box of it was sold at a fabulous price at the auction of the painter VENEVAULT. There is a drawing, or rather a series of sketches, by WATTEAU on a single sheet of chamois paper, in the Galerie des Dessins at the Louvre (No. 1326), in sanguine, which conveys an idea of his marvellous power of giving expression by a few touches. There is the head of a woman wearing a *toque* behind that of a young man; on the left a girl's face seen in profile, and other heads par-

tially turned away from the spectator, each a mere outline, but expressing the individual characteristics of each personage as clearly as their portraits in oil could do. Near this is another drawing, in which one recognises four sketches for the single figure of *L'Indifférent*—a *chef-d'œuvre*, to be found on the wall to the right of the Las Cases Gallery in the Louvre. The sketches prove how difficult WATTEAU was to please in the pose or attitude of his figures. In the finished picture *L'Indifférent* is a young man standing in the midst of a charming landscape in an attitude which betokens irresolution. In his three-cornered hat is a freshly-blown rose, his short cloak is of a bluish-green tint, the lining being pink, his long waistcoat and hose are blue, the rose tint is repeated in the colouring of his stockings and shoes. Behind him is one of those "distances" of indescribable and mysterious loveliness WATTEAU alone could paint. The companion picture, a beauty in white satin, is chiefly remarkable for the marvellous *plis cassés* into which the satin breaks, and for the solidity with which it is painted. These are gems on a small scale. The most important of WATTEAU's works at the Louvre is, however, the *Embarquement de Cythère*, so well known by engravings it is superfluous to do more than allude to it as being one of the creations of WATTEAU's genius in which the poetic dreaminess he threw into a background is best manifested. It was painted for his *pièce de réception* at the Academy. WATTEAU was received, five years after his admission as Associate—that is, in August 1717, the delay in his reception as member having been caused by his procrastination in finishing the diploma picture.

WATTEAU did not possess the quality which is called in-habitiveness by the phrenologists. His restless nature could not long endure the same habitation. Against M. CROZAT's wish, he quitted his generous patron, and went from a sumptuous mansion to reside with his friend M. VLEUGHEL, an artist who was subsequently director of the French Academy at Rome. DE LORANGÈRE attributes WATTEAU's leaving M. CROZAT to independence of spirit and love of liberty. It is certain that he never remained long in any place, and was as little satisfied either with his surroundings as with his own works. M. DE JULLIENNE says he was *atrabilaire* in temperament, which is probably the best definition of his irritable and peculiar nature. M. DE CAYLUS deplored this temperament, inasmuch as it incapacitated WATTEAU from enjoying much present comfort and deprived him of confidence in his future career; it likewise made him the dupe of intriguing speculators. In the midst of his splendid success he was miserable, although he had more commissions than he could execute, and his wealthy patrons overwhelmed him with kindness.

In one of his letters to M. DE JULLIENNE he thanks him for a present of venison, and announces that he dispatches that morning the picture ordered for the dining-room; he hopes the wild boar and the fox in the foreground will please M. DE JULLIENNE, as he confesses the general effect of the work had given him satisfaction. It appears that WATTEAU commenced the picture on a canvas which proved too small for the space on the wall the picture was intended to fill; GERSAINT sent a man to add a piece of canvas on the right, and the vamping was so cleverly done that WATTEAU was enabled to introduce a group of horses, trees, &c., much to his own satisfaction. In another letter WATTEAU announces to his friend M. DE JULLIENNE that the Abbé DE NOIRTERRE had made him a truly regal gift, a work by RUBENS, in which were angels' heads behind a cloud, and beneath, a woman absorbed in meditation. "Nothing," he writes, "could have made him happier;" since he received this picture he could not remain a moment quietly at his easel; he had placed it above a reading-desk, as it were on an altar, and believes that RUBENS never executed finer work.

In 1719 WATTEAU was persuaded to visit England, a step from which his friends vainly tried to dissuade him. GERSAINT, who was personally attached to him, states that up to this period WATTEAU had shown an utter indifference to money, but that he suddenly appeared anxious to undertake the journey for the purpose of acquiring an independence.

In the Bibliothèque Nationale there is a curious engraving drawn by WATTEAU in London, but engraved several years after his death by ARTHUR POUND, in 1739. The subject is the portrait of Dr. MISAUBIN. A foot-note by MARIETTE states that the doctor had been a French refugee. The portrait is evidently a satire. The man was a quack, who professed to sell a remedy for every disease, and he has been introduced as



such by HOGARTH into one of the scenes of the *Mariage à la Mode* series. WATTEAU had probably consulted him, and in revenge for the failure of the medicines drew this caricature. The artist was much sought after in England, and his works executed during the ten months he resided here were liberally paid for; but the fogs were insupportable to the lover of luminous skies and sunny atmosphere. During his absence he had requested M. DE JULLIENNE to have an inventory made of his property and to have an auction thereof. The result of the sale was the modest sum of 3,000 francs (120*l.*), which would now be readily given for one of his pencil sketches. His poverty is not surprising when one reads the following receipt in his writing for a large picture containing eight figures:—

J'ay reçu de Monseigneur le Duc D'ORLÉANS 260 livres (francs) pour un tableau qui représente un jardin avec 8 figures. Fajt à Paris le 14 Août, 1719. ANTOINE WATTEAU.

This receipt is in the possession of Baron DE ROTHSCHILD. He returned from England completely broken in health, but glad to see his friends. GERSAINT, who had been his steady patron, asked him to draw something he might retain. WATTEAU replied, "I will paint a signboard for you." The result was the picture of world-wide celebrity, in which we have the interior of GERSAINT's shop. In the foreground on the right is a lady in hoop and *sacque*, to whom GERSAINT, standing on the far side of the counter, on which the lady leans, shows a picture. With her right hand she flirts a fan. In the centre foreground are two figures. The one on the right is that of a young girl, whose *sacque* of rose satin falls in folds of marvellous gracefulness, catching a gleam of sunshine from the open door; a knot of rose ribbon fastens her hair. A young beau, attired in a chocolate-coloured suit and ample wig, wishes to lead her towards a picture in the background; on the extreme left men are unpacking paintings from a case. There is an engraving of this well-known work in the *Hôtel Carnavalet*. It is hung in the room which was once Madame DE SEVIGNÉ's boudoir.

PATER copied *L'Enseigne de Gersaint*, but reversed the subject. The copy PATER made of it was exhibited at the Arts Décoratifs in 1880. It is the property of the picture-dealer M. PETIT, who refused 1,000*l.* for it. After he returned from London WATTEAU lived in obscure lodgings he had asked GERSAINT to find for him, strictly forbidding GERSAINT to divulge his place of abode. The signboard—as WATTEAU was pleased to call his picture—finished, he became so seriously ill that he feared to inconvenience GERSAINT, who had insisted on his removing from the poor lodgings to his house. GERSAINT struggled unsuccessfully against his restless wish for change. WATTEAU became impatient, and was only tranquillised when GERSAINT informed him that his friend M. LE FÉORE, Intendant des Menus Plaisirs du Roy, had placed his house at Nogent at his disposal. WATTEAU was labouring under mental depression as well as physical illness. To M. DE JULLIENNE he made a remark which expresses this: "Le pis aller n'est pas l'hôpital, on n'y refuse personne." A presentiment of his early death must have come over him at Nogent, for he sent for PATER, who some years before had begged of him some instruction which WATTEAU had refused. He desired PATER to stay with him at Nogent in order that he might give him the benefit of his advice. PATER for months daily painted under the eye of the dying man, who spared no trouble in the effort he made to impart the secret of his success to the younger artist. PATER constantly referred to this with gratitude, and confessed that all he knew had been acquired at this period from WATTEAU.

His friends surrounded him with attentions he received gratefully. No expense was spared by them to procure for him the best advice Paris could supply. The curate of Nogent paid him several visits. On one occasion he brought him a crucifix. On seeing it WATTEAU exclaimed, "Is it possible that any one could have thus caricatured my Master?" and immediately commenced a painting of CHRIST on the Cross as a gift to the good curate. The Comte DE CAYLUS remarks that although this work was by no means worthy of his genius, the countenance expressed the suffering the dying artist experienced himself. He expired July 18, 1721, at the age of thirty-seven.

ANTOINE WATTEAU executed in aquaforte *Les habits sont Italiens*, of which M. DE GONCOURT possesses the only copy extant; *The Recruit going to join his Regiment*, and seven *figures de mode*. He painted three portraits of himself,

which have been engraved by LÉPICIE and BOUCHER; as also of ROSALBA CARRERA and of VLEUGHEL, and portraits of M. DE JULLIENNE and himself conversing in a park, entitled *Conversation*. COCHIN engraved six of the scenes of military and of theatrical life; AUDRAN two mythological subjects and fourteen pastoral scenes; AVELINE eight; the Comte DE CAYLUS seventy single figures and several rustic subjects. *Le Lorgneur*, by TARDIEU; the *Fêtes Venétiennes*, by CARS; *L'Île Enchantée*, by LEBAS; *La Sérénade Italienne*, by SCOTIN, &c., are among the best known of the 481 of WATTEAU's engraved works, and 350 etchings have been reproduced of *Figures de Différents Caractères*. Besides these are a large number of unsigned engravings of other pictures, of which library of preserved in the Bibliothèque Nationale and in the copies are the Arsenal.

### THE ACCIDENT AT ST. PATRICK'S CATHEDRAL, DUBLIN.

THE accident which happened in Dublin a few days ago, through the fall of a buttress of St. Patrick's Cathedral, calls for a few remarks, although some of the circumstances of the case have yet to be explained. St. Patrick's is one of the two cathedrals possessed by Dublin, and which have been restored at the cost of manufacturers of intoxicating drink. It is a large Gothic structure, with a high steeple that is comparatively modern, and in the opinion of many of the inhabitants of Dublin is the most remarkable part of the building. SWIFT was Dean of St. Patrick's in the early part of last century, or, to use his own words, was "absolute lord of the greatest cathedral in the kingdom." The cathedral revenues were husbanded by SWIFT, but in later times they were barely sufficient to meet the expenses. There were no funds available for repairs, and the building was gradually falling into ruin. When the late Dean PAKENHAM was appointed he resolved to appropriate a part of his income to pay for works, and for several years a few men were to be seen pottering about the cathedral. The way in which the repairs were carried on would gladden the hearts of the opponents of restoration. There was no system, for no architect was allowed to prepare a plan dealing with the cathedral as a whole. The patching of the building was, in fact, one of those desirable jobs which builders are eager to secure, as they allow of the utilisation of spare days. Under such circumstances it would be vain to expect that substantial work was to be executed. Dean PAKENHAM appeared to be the only man who had an interest in the condition of the building, and it was not difficult to satisfy him. The workmen understood the state of affairs, and they might be trusted to make light of their responsibility. After a time Mr. GUINNESS, a wealthy brewer, offered to take charge of the restoration of St. Patrick's, and the Dean was glad to hand over the cathedral to him to be operated on. A wholesale renovation was at once undertaken, the extent of it being left to the discretion of Mr. GUINNESS' builder. The sum expended was so large as to be without precedent in Ireland, or even in England; but, inasmuch as there were no architects' fees, everybody concerned was no doubt satisfied. It would be strange if the fortunate contractor were otherwise.

The Cathedral of St. Patrick's thus became not only an illustration of the munificence of a citizen of Dublin, but a striking example of the success of the policy of dispensing with an architect. It might long have continued to be distinguished on those accounts but for the catastrophe of last week, the origin of which may now be described. The site of the building is at a low level; near it runs a dirty stream called the Poddle, and which is a sort of Fleet Ditch. The lower part of the cathedral was of late years periodically flooded, and at length the authorities were compelled to undertake works for the drainage and security of the foundations. The works consisted of the underpinning of the walls and buttresses, the laying down of a tile floor, and the construction of an engine-house in connection with the hot-water apparatus. The old precedents appear to have been disregarded, for the works were under the superintendence of an architect.

The underpinning of the buttresses was commenced last week. A trench was opened near the north wall, and was excavated a few feet under the foundations. The first buttress that was underpinned is the one which collapsed, killing in its fall a woman and two boys. It was about 70 feet high, 4 feet wide, and projected 7 feet from the body of the church. As



the underpinning was supposed to be simple and likely to be completed in a short time, it was not supposed that any shoring of the buttress was necessary. The foreman mason, in describing what was done, said to the coroner and jury that "he took a foot and a half down, a foot and a half at the right, and a foot and a half at the left, and that he pinned up each portion of it before he commenced another." It is possible that the material beneath the buttress was barely sufficient to carry a mass of masonry of which the weight has been calculated to be more than 90 tons, but when a part of the foundation was removed the remainder was overweighted. The remarkable part of the case is that the whole weight came upon the foundation. The buttress was, in fact, stuck on the wall without being tailed in or tied throughout its entire length, and consequently there was nothing to take the load off the ground. It is easy to imagine what followed. A space between the buttress and the wall became evident, but it is needless to say the foreman did not apprehend danger, and nothing was done to prevent an accident. In the middle of the day the buttress fell suddenly in a mass which was not broken until the railings and ground were struck. The street adjoining the cathedral is rather wide, otherwise there would have been damage to some of the houses.

The buttress, which was constructed in so peculiar a way, would seem to be the work of the builder who was employed in 1845 by Dean PAKENHAM. It is precisely the kind of make-believe that might be expected when work is allowed to be carried on without the superintendence of an architect, and a scrutiny of the building would probably reveal many other examples of defective masonry. The main cause of the accident consequently does not arise from negligence on the part of those who now have charge of the cathedral. It might have been possible to preserve the buttress if the architect and builder were aware that the buttress was practically detached from the wall, but it was not unreasonable to assume that a compact mass of masonry could stand for a few hours, if partially supported.

### THE DAWSON MEMORIAL, BIRMINGHAM.

A MEETING of the subscribers to the George Dawson Public Memorial Fund was held in Birmingham on Tuesday evening. The report from the executive committee was read. It stated that a bust of Mr. Dawson by Mr. Williamson was finished and placed in the Church of the Saviour on August 8 last. Two members of the General Committee, on their own responsibility, saw Mr. Woolner as to his preparing another model for a marble statue. In answer to a letter lately addressed to him on the subject, he intimates that he cannot satisfactorily do this without definite instructions as to mode of treatment. Meanwhile, and early in August last, the fact that the statue had been injured was made public. The damage to the statue has rendered it useless to further propose or to discuss any alteration to the statue or any change in its position. It is evident that this part of the memorial must now be begun over again. Mr. Thomas Barnsley was communicated with, to ascertain what he was prepared to do in the matter. In order that his offer may be fairly judged, it should be here stated that the amount of Messrs. Barnsley's bill for the erection of the canopy, exclusive of the carving, which was done by Mr. Barfield, was 485*l*. Mr. T. Barnsley has offered to subscribe towards a new statue the sum of 250*l*. There is in the bank a balance of the old subscriptions amounting to 250*l*, and the subscriptions to a marble statue reported at the last meeting amount to 186*l*. 14*s*.; total 686*l*. 14*s*. The estimate for a new statue already mentioned to the subscribers is 800*l*. The executive committee has therefore subscribed the balance requisite to make up the 800*l*, and that sum is now at the service of the successors of the present executive committee. The present committee now resigns its position, and it is for the subscribers to elect a new committee, and thereafter take such steps as they may think desirable.

The report of the committee was adopted.

Mr. J. H. Chamberlain asked the meeting to allow him to propose that they should pay a vote of thanks to Mr. Thomas Barnsley for his very handsome contribution to the fund. Mr. Barnsley was entirely ignorant of the accident which had happened. It was a pure accident, and happened in a very curious way. The statue was sent down from London in a long box, the top of which was fastened by various bolts and screws to the sides and bottom. This was taken away, and the statue was hoisted to its place. Then the box, with the exception of the front, was left round the statue for the purpose of protecting it. Ultimately, when the box came to be moved for the purpose of veiling the statue, the workmen, in drawing the box away, did not notice a large bolt projecting in the inside, and which struck the figure exactly upon the nose. He dared say a great deal of consternation followed. Upon the recent discovery of the damage the committee were in a great difficulty,

because Mr. Barnsley had undertaken to fix the statue, not as part of the contract for the canopy, but at the request of the committee. Mr. Barnsley, however, had raised no legal question or difficulty of any kind. He had put himself at once in Mr. Johnson's hands, stating that he did not want to look at the question from a legal point of view or to discuss the question of responsibility, but he wished to relieve the committee from the very great difficulty that he felt they were in. Although this was a personal loss to Mr. Barnsley, his conduct in the matter did not surprise him (Mr. Chamberlain), for he had had the pleasure of knowing Mr. Barnsley in business for the greater part of thirty years, and he had only acted in this case as he had acted in others. He thought that all present would agree that Mr. Barnsley's liberality was great, as his conduct had been nothing less than noble. He moved "That the hearty thanks of the subscribers to the Dawson Memorial be given to Mr. Thomas Barnsley for his handsome donation towards the new statue."

Mr. G. J. Johnson, in seconding the resolution, said that Mr. Barnsley had left the settling of the amount he should pay in the hands of Mr. Chamberlain and himself. Mr. Barnsley concluded his last letter by the words—"I do this because I value my friends more than the money." Mr. Barnsley's action had relieved the committee from a very serious difficulty in which they would have been placed had Mr. Barnsley treated the matter in a narrow or technical spirit. They would all agree that Mr. Barnsley was deserving of their most hearty thanks.

The resolution was unanimously carried, and an executive committee was afterwards elected.

Mr. Leadbetter moved that Mr. T. J. Williamson should be commissioned to execute a statue in marble at a cost of 800 guineas.

Mr. Basnett seconded the motion.

Mr. T. F. Walker said he should prefer commissioning Mr. Williamson for a model, and he felt that if they spent the whole 800 guineas upon a series of models, and got a satisfactory one ultimately, there would be no difficulty in obtaining the money for carrying it out in marble. He believed that he himself could raise the money within a month. If the model was a success they could go on with the statue; but if it was a failure he should regret it, whether by Mr. Williamson, Mr. Woolner, or anyone else.

Mr. Leadbetter said his intention was that the sculptor should be commissioned for a model.

Mr. J. S. Manton said it was so desirable that there should be no mistake this time, that he would second Mr. Walker's resolution that the executive should obtain a model or models from one or more sculptors as in their wisdom they might think fit.

Mr. Walker said the last speaker had somewhat misunderstood his amendment. He thought the feeling of the subscribers was so much in favour of Mr. Williamson that they would desire him to produce a model first.

Mr. Manton entirely agreed with Mr. Walker, only he was anxious not to tie the hands of the committee to one sculptor.

Mr. J. H. Chamberlain said he should like to ask gentlemen present as to what they meant by a model. In the case of a model for a bust, it was usually made about the size of the bust itself, as was done by Mr. Williamson for the bust at the Church of the Saviour; but the model for a statue was usually only a small work—about 2 feet 6 inches high. There was very much greater difficulty in judging of a statue from a small model than from a large one; but, on the other hand, to get a model the size of the proposed statue would involve a considerable expense.

Mr. Shammon suggested whether it would not be desirable to have a full-size model, and have it placed in position under the canopy.

The Chairman said he was afraid it was impossible to convey a large work in clay a long distance and place it under the canopy.

Mr. A. W. Wills said that no sculptor of repute would undertake to submit a model six or nine feet high. A sketch model would show the general treatment proposed of the figure and drapery, and if it was not exactly what was desired it should be altered; while as to Mr. Williamson's skill in producing a successful posthumous likeness it was amply shown by his bust of Mr. Dawson, his statue of Priestley, that of Dean Milman, and other works with which some in that room were acquainted. He was strongly in favour of commissioning Mr. Williamson to submit the usual sketch model or models. In the case of the Priestley statue he said two models were submitted.

Mr. Mann thought that an invitation to submit a model would be bringing Mr. Williamson into a kind of competition, and he should prefer giving him the commission for the statue at once.

Mr. J. S. Manton said that in the case of the bust of the Church of the Saviour a model was invited from Mr. Williamson, and he submitted one without objection, well knowing that if it was not approved the marble bust would not be ordered.

Mr. Chamberlain asked whether that was what they wished in the present instance? If the model was not satisfactory, and they did not order the statue, he supposed they would be willing to pay for the model in any case.

After some further discussion the resolution was amended as follows:—"That it be an instruction to the executive committee to commission Mr. Williamson to prepare a small model or models



for a statue, and that they submit the same to the inspection of the subscribers."

Mr. J. H. Chamberlain said he understood the resolution to mean that Mr. Williamson should prepare a model; he also understood that if that model was not satisfactory, and Mr. Williamson wished it, he should be at liberty to make another, and, if necessary, a series. Speaking on behalf of himself and his friends around him, he (Mr. Chamberlain) could say that all they wanted to do was to produce a satisfactory model of Mr. Dawson, and one that should be consonant with the wishes of the subscribers.

The resolution was then carried unanimously.

### CAIRO.

THE following account of Cairo, from the French of M. Isambert, will have exceptional interest at the present time:—

Gewher, the general of the Fatimite Sultans of Maghreb, after having conquered Egypt in the name of his master, El Moezz, in the year of the Hegira 358 (969 of the Christian era) commenced the erection, a little below the Arab town of Fostat, and at a short distance east of the Nile, of a new city, which, in commemoration of his conquest, he called El Kahira, "the Victorious," a word which Europeans have corrupted into Cairo. Since the year 973, when the Fatimites adopted this town as their residence, it has been regarded as the capital of Egypt. The Arabs even gave it the name of Egypt, Masr, calling the ancient Fostat "Masr-el-Atikah" (Old Masr), or, as the Europeans say, Old Cairo. The oldest part of the town, built by Gewher, in which is situated the mosque of El Azhar, was that which they now call El Kasrein, "the two palaces," of which one, inhabited in the twelfth century by Saladin, was afterwards a long time occupied by the court of the Cadi. It is a little distance north of El Azhar. This primitive part of the town is also called Medineh, just as in Europe the name "city" is frequently used for the most ancient quarter of a large town. The establishment of the Fatimite dynasty opened for Egypt a new era in architecture. Until then the country had been governed by deputies of the caliphs of Damascus or of Bagdad, whose solicitude for the inhabitants of Egypt, whence they derived a great part of their revenue, never went so far as to build or to adorn a great capital, which might prejudice their own residence. The Fatimite caliph Hakim-bi-amr-illah, although in a moment of madness he one day set fire to Cairo, contributed numerous buildings to the embellishment of the town, among them the mosque which bears his name (Gama-el-Hakim). When, at the fall of the Fatimite caliphs, the Abbassids, reigning at Bagdad, became supreme, Cairo still continued to remain the seat of powerful dynasties, which succeeded one another from the year 1176 until the conquest of Egypt by Selim I. Salah-Eddin-Youcouf, so well known under the name of Saladin, the founder of the Ayoubite dynasty, substituted in 1176 for the brick walls with which its founder had encircled the town a stone enceinte, while at the same time he constructed the citadel and considerably extended the town towards the south. It was also during the reign of Saladin that Christian merchants were first allowed to settle in Cairo, and to form the Frank quarter called El Mouski. "The succession of these dynasties," says M. Pascal Coste, "gave birth in each period to palaces in which the vanity of each Prince sought to surpass his predecessors. Strangers were received in audience and the judgments and decisions of the Sultan were delivered with infinite ceremony. Vast halls and pillared porticoes were built, where the Prince on the throne, his Ministers, the officers of his court, the scholars whom he patronised, and, in short, all sorts and conditions of men, took their places, every man according to his rank. This arrangement of palaces, unknown to the countries of Europe, would seem from the indications furnished by ancient monuments now in ruins to have been a peculiar feature of the courts of the Persian monarchs. Many Arabic words describing this luxurious architecture are evidently borrowed from the Persian language, and it is remarkable that when the poets wish to describe the solidity, the magnificence, and the grandeur of building porticos, or halls of audience, the courts and the porticos of the Chosroes are always cited as models." It was under these independent dynasties that luxury made its way into Egypt. Colleges were created with libraries, where all the princes, Abbassids or Fatimites, Ayoubites, and Mamelukes, felt it an honour to hold receptions. One of the Mameluke Princes, Sultan Bibars, was distinguished for the numerous buildings with which he endowed Egypt and Cairo. He repaired the mosque of El Azhar, and the great tower of the citadel, which was falling into decay, and founded colleges and mosques at Cairo. The succession to the throne, in 682 of the Hegira, of Sultan Kalaoun marked an epoch rich in great monuments. A mosque bearing his name still exists. Melek-en-Nacer, his son, followed the traditions of his father, "It seemed," said the historian, "as though the order had gone forth to build; emirs, soldiers, ministers, even ordinary inhabitants of Cairo vied with one another under this Circassian dynasty in the splendour of their dwellings. Among these princes may be further cited the Sultan Barkuk and Kait Bey, whose names are still borne by remarkable buildings in Cairo. During these reigns, towards the end of the seventh

century of the Hegira, the art of architectural decoration attained the highest degree of magnificence and perfection. The cemeteries of Cairo have preserved from this period many buildings which are models of elegance. The stone aqueduct which brings the water of the Nile to the citadel was constructed in 1500 A.D., in the reign of El Ghouri. There is nothing noteworthy in the history of the Egyptian capital during the centuries which followed until the epoch of the French expedition. The Battle of the Pyramids was followed by the entry of the French army into Cairo on July 22, 1798. There is no need to recall the flatteries with which Bonaparte tried to gain the Sheikhs and the Imaams, and to gain the attachment of the population of Cairo. The insurrection of October 21 soon showed how unreal was their submission, and the revolt was drowned in blood. But the absence of the commander-in-chief during his mad expedition to Syria compromised the new colony, which was to be shortly left in the lurch by Bonaparte's departure for Europe. Kleber, who succeeded to the command, was assassinated by a fanatic in the Ezbekeeyah Gardens. Under Mehemet Ali and his successors Europeans have exercised a preponderating influence in Egypt, and from their point of view the progress of the country has been considerable. The reforms of the last few years have perhaps gone too far in applying to the city of Cairo the system of clearing everything to open out wide streets, and of building houses in the European style. The city is thus more and more losing its Oriental air. In all the western part of the city this "Hausmannisation" has been hurriedly pushed on without sufficient regard for artistic feelings; as though the intention were to make Cairo into an *auberge du monde*, where the indolent could spend their money and dissipate their *ennui* amid pleasures purely material. A nobler destiny might be dreamed of for this splendid capital, where the art of the Pharaohs and the Arabs unite with luxuriant Nature to transport our thoughts into the highest regions of the ideal.

### THE LATE MR. W. B. C. FYFE.

ON the 15th inst. Mr. William Fyfe, who was one of the best known of the Scottish artists in London, died suddenly at his residence in Abbey Road, St. John's Wood.

Born at Dundee, and brought up at the neighbouring village of Carnoustie, in a household of the old Scotch school, where the artist's profession was ranked as something certainly less than respectable, Mr. Fyfe encountered no small opposition in his artistic aspirations; but more discerning friends than those immediately around him interested themselves in him, and he became at the early age of fifteen a student of the Royal Scottish Academy. After three years' study in Edinburgh, during which time the tender grace of his crayon portraits attracted special notice from the President, Sir George Harvey, &c., and also won him Academy prizes, he proceeded to Paris, where he lived during 1857 and 1858.

In 1862 he returned to the Continent, and a year of busy work was spent in the art galleries of France, Italy, and Belgium. In 1863 he settled in London, at the same time as his warm admirer and friend, John Faed, R.S.A. A busy period followed, in which portraiture was varied with landscape and *genre* pictures. A Covenanted subject, *The Death of John Brown of Priesthill*, attracted much notice; while the result of summers spent in Scotland was seen alike in his picture *Jeanie Deans and the Laird o' Dumbiedykes*, and in the collection of a series of studies of Scotch interiors. The years 1868 and 1869 produced a list of *genre* pictures of merit and interest, *The Wood Merchant*, *The "Scotsman," Sir? The Flower Girl*, *The Orange Girl*, *Marketing*, and *A Girl of the Period*, the last-mentioned work being made familiar to all lovers of pictures by exhibition in both the English and Scottish Academies, and in art exhibitions all over the country. The next four years, the most active period of the artist's career, brought *The Young Cavalier*, *On Household Cares Intent*, *The Page*, *The Maid of Honour*, *Bide a Wee*, and *What can a Young Lassie dæ wi' an Auld Man?* His best-known works of recent years were *A Good Catholic*, *Wandering Minstrels*, *The Love-Letter*, *A Quiet Christmas*, *The Fisherman's Daughter*, *A Chelsea Pensioner*, and the most important of Mr. Fyfe's historical pictures, *The Raid of Ruthven*. Among Mr. Fyfe's portraits a few of the most important are those of Lord and Lady Dufferin, Admiral Grenfell, Mr. Alderman M'Arthur, M.P.; Sir William Anderson Ogg, Sheriff of London and Middlesex; Dr. Lorimer, First Principal of the London Presbyterian College; John Faed, R.S.A.; Mr. C. E. Lewis, M.P.; the late Sir David and Lady Baxter; Mr. G. B. Bruce, the eminent engineer; the late Mr. Pontifex, Master of the Armourers' and Braziers' Company; and Mr. R. H. Giraud, Deputy Governor of the French Protestant Hospital. His last works are a charmingly simple yet graceful fancy picture, *Hide and Seek*, and *A Fisher Girl*, both at Nottingham Castle; and *A Portrait of the Artist*, which has been lent to the forthcoming Dundee Exhibition. On his easel, but fortunately finished, is *Nellie*, an exquisite fancy portrait. The whole studio, however, is full to overflowing of interiors and studies—pictures most people would have called them—with which Mr. Fyfe, though repeatedly offered large sums, declined to part. As a collector of singular taste and skill he was well known, and he has left his walls covered with many strictly



representative works of eminent brother artists. Of the power and freshness of Mr. Fyfe's own work all who saw his pictures testified. He was a member of the Council of the City of London Society of Artists, the Savage Club, the Scottish Artists' Club, and the Hogarth Club, and was an International Exhibition gold medallist of 1873. He was in his forty-seventh year, and leaves a widow, son, and daughter.

### GLASGOW ARCHÆOLOGICAL SOCIETY.

THE members of the Glasgow Archæological Society visited Murthly and Dunkeld on the 15th inst., being the annual excursion. At Murthly Castle the visitors were received by Mr. Ainslie, representing the owner, Sir Archibald Douglas Drummond Stuart. The *Glasgow Herald* says:—There are few more melancholy sights than this castle presents. It is an enormous pile, and from a distance produces all the effect that was intended by its architect, Mr. Gillespie Graham. But as one approaches nearer it is found that the vast building is only a shell. There are walls and a roof, that is all. There is no interior—if it be not a bull to say so. No steps lead up to that entrance door which has never been opened, no rooms, no stairs are there in the whole! Sir William Stuart, to whom the Murthly estate owes so much, raised the pile, but for many a long year it has awaited completion. The grounds are extensive and beautifully laid out. The old castle, which is close to the new building, possesses so many attractions that it is matter for wonder that Sir William Stuart should have thought it necessary to undertake the erection of a new castle. The castle is of very various dates, and would be bewildering in the extreme to any stranger. The principal attraction is the tower, which is said to be more than five centuries old. It contains a room where Prince Charlie is said to have slept, and other apartments of interest. A passage on the ground floor, where local tradition affirms prisoners were kept in olden times, has attractions of its own. The collection of family portraits is interesting, but the most famous of the pictures is that of Mary Queen of Scots when as yet she knew nothing of the rude kingdom she was here to govern, and was at once the beauty and the sovereign of the French Court. This picture was purchased from the Jesuits' College in Paris. The inquiry latterly raised in one of the archæological journals as to the colour of Mary's hair receives no enlightenment from the portrait in Murthly, for the Queen's hair is close-covered.

From Murthly (or Murtly) the archæologists drove through Birnam to Dunkeld Cathedral. On the way a message was conveyed to the party that the Dowager Duchess of Athole, having heard of the intended visit, had arranged to have a guide awaiting its arrival, and accordingly the carriages drove on to the entrance to the Duchess's grounds. Thence the visitors walked to the cathedral. It is said that so early as the year 815 the then King of the Picts made Dunkeld the seat of the supreme authority of the Culdee Church, and that thirty-five years later Kenneth MacAlpin brought to the Dunkeld Church a portion of St. Columba's relics. The fame of the church spread abroad, and it was soon exposed to the pillage of the Danes. It seems probable that the lay abbots of Dunkeld were hereditary. Crinan, said to have been father of the Duncan who was slain by Macbeth, was, says Skene, a great secular chief. In 1027 Dunkeld was burnt. The history of this early time, Mr. Galloway, the Foreign Secretary of the Archæological Society, did not think it necessary to discuss in his paper, and indeed all we know is slight in the extreme. After strolling through the cathedral the party met in the part occupied as parish church, and heard a paper from Mr. Galloway on Dunkeld, in which he traced the history of the bishopric from Cormac. Altogether there were thirty-two bishops of the Dunkeld see prior to the Reformation. Matthew, the twelfth bishop, was one of the ambassadors to France for promoting a treaty of marriage between Baliol's son and the daughter of the Count of Anjou, but it is to Robert de Cardney, the nineteenth bishop, that the cathedral owes most. In 1406 Bishop de Cardney founded the nave of the church, and raised it so far as the second row of arches. In his day he had many experiences, for at one time he was a hostage for the redemption of King James I. of Scotland from the English, and at another time he had to pay for his life from a band of murdering Highlanders. James Kennedy, the twenty-first bishop, came to Dunkeld in 1438; he was a Privy Councillor, Chancellor of Scotland, and one of the Regents during the minority of James III. Bishop Ralston was also a dignitary of State as Keeper of the Privy Seal and Lord High Treasurer. He finished the nave of Dunkeld Cathedral in 1447 and began the aisles. It is said that he and friends of his of high rank were so eager about the advancement of the work that they used to carry daily several burdens of stones from the quarry—a story for which the evidence is scanty. Bishop Brown, the twenty-seventh bishop, is said to have cured a pestilence that raged in Scotland by dipping the bones of St. Columba in water, and giving the people this consecrated water to drink; he also presented many splendid gifts to the church. But of Dunkeld's bishops Gawain Douglas is without doubt the most famous. He was a son of that Earl of Angus who was called "Bell the Cat," and his two eldest

brothers, George and William, with two hundred other men of Douglas, fell at Flodden field. Gawain was born in 1474, and after having been successively Rector of Hawick and Provost of the Collegiate Church of St. Giles, Edinburgh, the Queen endeavoured to have him made Archbishop of St. Andrews. The ecclesiastical feuds, however, of the time were very bitter, and Douglas, with a spirit of moderation very rare in those days, retired from the struggle very early. The Queen, to reward him for numerous disappointments and trials, nominated him to the see of Dunkeld when it became vacant on Bishop Brown's death. Through the influence of the King of England a Papal bull was obtained in favour of Douglas, but the Earl of Athole had a nominee of his own, and again Douglas was unwillingly embroiled in a bitter Church quarrel, and was indeed imprisoned for twelve months. Ultimately he was consecrated Bishop of Dunkeld by Cardinal Beaton at Glasgow, but when he reached Dunkeld he found his rival's forces still in possession. The Regent interfered, and after a very threatening interval between his arrival and his installation Douglas prepared to settle in his new sphere. He was, however, too prominent a man to be left at Dunkeld, and only a few months after he had been installed he was selected to accompany the Duke of Albany to Paris to conclude a renewal of the ancient league between Scotland and France. A later mission to England enabled Bishop Douglas to make the acquaintance of Polydore Vergil. At last his enemies again prepared to destroy his influence. He was summoned to Rome, but before he could prepare to go the plague seized him in London, and he died there at the early age of 48. He was buried in the Savoy Church. His poetical works mark an epoch in British literature, but his great translation of the "Æneid" has of them all chiefly served to carry his name to posterity. Mr. Galloway gave an account of the varying fortunes of the cathedral and a summary of the general history of Dunkeld, with an outline of the fortunes of the Athole family.

On the motion of Bailie Wilson, Glasgow, the thanks of the society were accorded to Mr. Galloway for his learned paper.

After inspecting the great larch in the grounds, the grave of General Charles Edward Stuart, and the effigy of the "Wolf of Badenoch," the party proceeded to the Birnam Hotel, Birnam, where dinner was served.

### PATENTS FOR INVENTIONS.

THE annual report of the Commissioners of Patents for the year 1881 has just been issued. It states that the number of applications for letters patent for the year was 5,751, being 234 more than for the preceding year. The number of letters patent sealed was 3,948, of which 68 lapsed in consequence of the patentees having neglected to file final specifications in pursuance thereof, leaving 3,880 in force. Of this latter number final specifications were filed in respect of 3,621, complete specifications being filed in respect of 259. Applicants failed to seal their patents in 1,798 cases, opposition was offered in four cases, and one application stands over through the decease of the applicant. A table is given showing that about 65 per cent. of the applications for patents from 1852 to 1881 became valid patents, that of the valid patents obtained upon the applications from 1852 to 1874 nearly 30 per cent. paid the third year's stamp duty of 50%, and continued in force until the end of the seventh year, and that about 10½ per cent. paid the seventh year's stamp duty of 100%, and consequently remained in force for the full term of fourteen years. The descriptions of inventions deposited and filed in the office under the new law from October 1, 1852, when the Patent Law Amendment Act came into operation in relation to 113,379 applications for patents have been printed and published with drawings in outline. The specifications of patents under the old law from the earliest period at which specifications were enrolled, 13,561 in number, have been printed and published in like manner. The old and new law specifications amount together to 126,940. Abridgments of the specifications of patented inventions are prepared and published in classes, each confined to one subject or group of subjects, in order to facilitate the searches of inventors who are desirous of ascertaining if their inventions are novel. This series of works, which will consist of about 110 subjects, when completed to the end of the year 1876, will afford in a compact form a key to the inventions patented under each subject between the years 1617 and 1876. Thenceforward the volumes of abridgments will be published for decennial periods. Copies of the Commissioners' publications are sold at cost price at the Sale Department, 38 Cursitor Street. The receipts from the sale of these publications during the year 1881 amounted to 2,912*l.* 4*s.* 4*d.* The Patent Museum at South Kensington has been visited from its opening on June 22, 1857, to the end of the year 1881, by 5,257,000 persons. During the year 1881 there were 282,121 visitors. During the year 1881, 91 ornamental and 137 useful designs were provisionally registered, and complete registration of 15,176 ornamental and 128 useful designs was effected. There were also three designs registered for sculpture. The report is signed by the Lord Chancellor, the Master of the Rolls, and the Attorney-General and Solicitor-General.



## LIGHTNING CONDUCTORS.

A COPY of rules for the erection of lightning conductors, based upon the recently-published report of the Lightning Rod Conference, has, with the accompanying covering letter, been recently issued by the Explosives Department of the Home Office to the occupiers of all factories and magazines for explosives, and to those local and police authorities upon whom devolves the inspection of stores of explosives:—"Home Office, Whitehall, London, Sept. 1, 1882.—Sir,—The accompanying code of rules for the erection of lightning conductors has been abstracted (nearly verbatim) from the recently-published report of the Lightning Rod Conference. This Conference was assembled at the instance of the Meteorological Society, and included delegates from that body as well as from the Royal Institute of British Architects, the Society of Telegraph Engineers and of Electricians, and the Physical Society. There were also attached to it two distinguished scientific men. Permission to print and circulate this abstract has been courteously accorded by Mr. G. J. Symons, F.R.S., President of the Meteorological Society, who acted as secretary to the Conference and editor of the report. The carefully-considered opinions of such a representative body of scientific men, based upon a mass of practical as well as theoretical evidence, cannot fail to command the very attentive consideration of all persons specially interested in the subject of lightning conductors. Among those who are so interested may be specially named the occupiers of factories and magazines for explosives. On these grounds, and in view of the fact that the report as a whole may not have come under your notice or be readily accessible to you, I venture to forward a copy of these rules, and to accompany the same with the expression of a hope that you will give them the consideration to which they are entitled, and will take such steps as may seem expedient to you in regard to bringing your system of lightning conductors as far as practicable into conformity with the principles therein enumerated. These principles should, I consider, guide this Department in forming an opinion as to the efficiency, or otherwise, of the lightning conductors which may come under our official observation.—I have the honour to be, your obedient servant, V. D. MAJENDIE, Colonel, H.M. Chief Inspector of Explosives."

The following are the rules referred to in the above letter:—

1. *Material of Rod.*—Copper, weighing not less than 6 oz. per foot run, the electrical conductivity of which is not less than 90 per cent. of that of pure copper, either in the form of rod, tape, or rope of stout wires, no individual wire being less than No. 12 B. W. G. (109"). Iron may be used, but should not weigh less than 2½ lbs. per foot run.

2. *Joints.*—Every joint, besides being well cleaned and screwed, scarfed, or riveted, should be thoroughly soldered.

3. *Form of Points.*—The point of the upper terminal \* of the conductor should not have a sharper angle than 90°. A foot below the extreme point a copper ring should be screwed and soldered on to the upper terminal, in which ring should be fixed three or four sharp copper points, each about 6 inches long. It is desirable that these points should be so platinised, gilded, or nickel-plated, as to resist oxidation.

4. *Number and Height of Upper Terminals.*—The number of conductors or upper terminals required will depend upon the size of the building, the material of which it is constructed, and the comparative height above ground of the several parts. No general rule can be given for this, except that it may be assumed that the space protected by the conductor is, as a rule, a cone, the radius of whose base is equal to the height of the conductor from the ground.

5. *Curvature.*—The rod should not be bent abruptly round sharp corners. In no case should the length of a curve be more than half as long again as its chord. A hole should be drilled in string-courses or other projecting masonry, when possible, to allow the rod to pass freely through it.

6. *Insulators.*—The conductor should not be kept from the building by glass or other insulators, but attached to it by fastenings of the same metal as the conductor itself is composed of.

7. *Fixing.*—Conductors should preferentially be taken down the side of the building which is most exposed to rain. They should be held firmly, but the holdfasts should not be driven in so tightly as to pinch the conductor or prevent contraction and expansion due to change of temperature.

8. *Other Metal Work.*—All metallic spouts, gutters, iron doors, and other masses of metal about the building should be electrically connected with the conductor.

9. *Earth Connection.*—It is most desirable that, whenever possible, the lower extremity of the conductor should be buried in permanently damp soil. Hence proximity to rainwater pipes and to drains or other water is desirable. It is a very good plan to bifurcate the conductor close below the surface of the ground, and to adopt two of the following methods for securing the escape of the lightning into the earth: (1) A strip of copper tape may be led from the bottom of the rod to a gas or water main (not merely to a leaden pipe), if such exist near enough, and be soldered to it;

(2) a tape may be soldered to a sheet of copper, 3 feet by 3 feet by  $\frac{1}{16}$ -inch thick, buried in permanently wet earth and surrounded by cinders or coke; (3) many yards of copper tape may be laid in a trench filled with coke, having not less than 18 square feet of copper exposed.

10. *Protection from Theft, &c.*—In cases where there is any likelihood of the copper being stolen or injured it should be protected by being enclosed in an iron gas-pipe, reaching 10 feet (if there is room) above ground and some distance into the ground.

11. *Painting.*—Iron conductors, galvanised or not, should be painted. It is optional with copper ones.

12. *Inspection.*—When the conductor is finally fixed it should in all cases be examined and tested by a qualified person, and this should be done in the case of new buildings after all work on them is finished.

Periodical examination and testing, should opportunities offer, are also very desirable, especially when iron earth connections are employed.

## FORESTS AND CLIMATE.

A PAPER has been prepared by Dr. Schomburgk, the Director of the Botanical Gardens at Adelaide, on the influence of forests on climate. The object of the author is to prove that the destruction of forests usually has the effect of reducing the rainfall, while, on the contrary, the planting of trees broadcast over a country is one of the best methods which can be adopted for ameliorating its climate and increasing the annual fall of rain. It cannot, indeed, be proved that the climate of South Australia is altering for the worse in this respect. In fact, a comparison of the meteorological records will show that the annual average rainfall for the Colony during the past ten years has been 21.1 inches, as compared with 20.1 inches for the previous ten years. The fact is that in the agricultural districts of the Colony, and especially in those which were not originally timbered, the bringing of the land into cultivation has had the effect of slightly favouring the fall of rain. Ploughed land attracts moisture to a much greater degree than the unbroken soil. In considering the effect which the removal of forests *per se* has in altering the climate in South Australia, the only direct test that could be taken from the records issued by the Government Astronomer is the experience of the neighbourhood of Adelaide. If the time is divided which has elapsed since 1839, the year in which observations were commenced, into two periods, there is found for the first an average rainfall of 22.8 inches, and for the second one of 21.7 inches. It will thus be seen that, on the whole, the rainfall at Adelaide is diminishing, though very slightly, and perhaps the diminution in the amount of timber may have something to do with the change. Dr. Schomburgk, in searching for illustrations of the effect of trees on climate, goes further afield, and brings forward some striking instances, in which it is evident that loss of forests means loss of rainfall, and *vice versa*. He recalls how the Russians, by burning down some of the Transcaucasian forests at the time of their struggle with the Circassians, converted the country from a fertile land into a desert, simply through the cutting off of the supply of rain. Similar instances of rain having deserted a country denuded of forests have occurred in the Mauritius, in Jamaica, the Azores, and it may also be added to a still more remarkable extent in several of the smaller West India islands. No sooner had the forests of these places been destroyed than the springs and rivulets ceased to flow, the rainfall became irregular, and even the deposition of dew was almost entirely checked. On the other hand, it is generally accepted as a fact that Mehemet Ali increased the fertility of Egypt enormously by planting trees. He alone planted some 20,000,000 on the Delta, his successors followed up the work, and it is a noteworthy circumstance that the rainfall rose from 6 inches to 40 inches. Planting has also, it would seem, produced remarkable effects in France and Algiers. Extensive regions have been planted with gums and other trees, which, for the most part, grew to about 30 feet or 40 feet in height, and it is noticed that the quantities of rain and dew which now fall on the adjacent land are double what they formerly were.

**Boyle.**—The new parochial church of St. Joseph has been opened. The style of the building is late thirteenth-century Gothic. The plan is cruciform, and comprises nave, aisles, and transept, with western tower. Inside the roof is supported by twelve massive pillars of limestone, and the aisles are subdivided from the nave by four bays of the same material, resting upon caps, shafts, and bases. The three altars have been executed by Mr. O'Neill, of Great Brunswick Street, Dublin, and harmonise well with the style of the church. The canopy of the high altar reaches to a height of 13 feet, and is 12 feet wide, while beneath the table is an elaborately-carved panel bearing a motto on either side, and containing a group of the Annunciation and an angel. The general material is of Caen stone, all the shafts being of emperor's red and Irish marbles. In the reredos, which is subdivided into four panels, there are four statues representing the Four Evangelists. The altars are chiefly of Irish marbles. The entire cost of the church is about 8,000*l*. Messrs. Goldie & Child are the architects.

\* The upper terminal is that portion of the conductor which is between the top of the edifice and the point of the conductor.



## NOTES AND COMMENTS.

SOME indignation was excited lately when it was stated in Parliament, on the strength of an affidavit by Colonel YOLLAND, that the directors of the Submarine Continental Railway had stolen a march on the Board of Trade by extending the heading of the Channel Tunnel for about 70 yards beyond the limits agreed upon. An application was accordingly made to the Courts of Justice by authority of the President of the Board of Trade; and as a penalty for sharp practice it was proposed to seize the whole properties of the South-Eastern and Submarine Railway shareholders. The engineer of the company protested against the allegation, and the accuracy of his measurements was confirmed by Sir FREDERICK BRAMWELL and others. But a second affidavit was forthcoming from Colonel YOLLAND, in which he adhered to the truth of his discovery. Afterwards he was induced to measure the Tunnel again, and found that he had incorrectly entered the length on the first occasion. Colonel YOLLAND confessed that his measurement was incorrect, and then he agreed with that of the engineer of the company. Errors are possible in surveying, but considering the interests involved, it was hardly to be supposed that a Government official could confound yards with feet in so short a distance.

THE Committee of the Dumbartonshire Art Club are now making arrangements for an exhibition in the Burgh Hall, Dumbarton, to be opened on October 13. The works of members will hold a prominent place, but many Northern artists will likewise be represented in the collection. During the short time the exhibition will be opened lectures on art will be delivered by Mr. J. D. PEDDIE, R.S.A., M.P.; Mr. ARCHIBALD ORR EWING, M.P.; the Rev. Dr. STORY, the Rev. WM. STEPHEN, Mr. WM. DENNY, and Capt. R. D. BUCHANAN.

It is reported from Rome that the Commission charged with the erection of a monument to King VICTOR EMMANUEL will shortly hold a meeting to consider and decide upon the conditions of the fresh competition that is to be held. It may be remembered that, although the first prize of 2,000*l.* in the former competition was awarded to M. NENOT—a young French architect—the Commission decided that none of the projects presented was worthy of execution. This decision has been very harshly criticised in the French press, its motive being rather naturally attributed to international jealousy occasioned by the success of a foreign artist in this distinctly national and patriotic work. The conditions of the new competition will be made much more stringent and precise than was the case in the first, and the site where the monument is to be erected will be indicated.

THE interest of the objects discovered at the Roman bath at Bath is some reward to Mr. C. E. DAVIS for the anxiety with which he has conducted the excavations. The south-western corner of the great bath has been laid bare, with its steps and pilastered piers, and many fragments have been found. One is a carved stone lion or sphinx, with conventional rugged mane in addition to the more natural form. The face is partially broken, and the legs are not perfect. The form suggests its having been one of the antifixæ on the angles of the hipped roofs. A similar lion was found in building the market. The other is a carved capital of the composite order, a base found a few weeks since enabling a complete restoration. This column is of later character than the greater part of what has been hitherto found, and clearly belonged to an addition to the baths, a colonnade, or more properly a peristylum, on the south of the baths, in the position now occupied by Swallow Street. This fronted the gardens of the baths.

THE French Minister of Fine Arts has contributed magnificently to the interior decoration of the new Hôtel de Ville in presenting the Municipality with two pieces of Gobelin's tapestry after LE BRUN. These works of art are about 16 mètres long by 4 mètres in height, represent respectively the elements Earth and Water, and are each valued at 70,000 fr.

SEVENTY-FIVE more statues are now being raised to their appointed positions on the exterior of the new Hôtel de Ville, Paris. When all the statuary has been placed the building will present an epitome in stone of the history of the French capital, as represented by its most eminent citizens of all ages.

A PORTION of the group now being erected by the sculptor FALGUIÈRE on the Arc de Triomphe in Paris has been freed of its scaffolding. This colossal work consists of four horses harnessed to a triumphal car, with a female figure representing France following this carriage of Victory and dominating the group. For the present the artist's work is only being erected temporarily at his own expense in lath, or rather beams, and plaster, with the object of realising its effect as a crown for the splendid monument at the top of the Champs Elysées. This experiment costs, however, at least 2,000*l.* Should it satisfy the artistic commission that is to be nominated expressly for the purpose of judging its effect, the present temporary structure will be demolished and the group definitively executed in bronze at a computed cost of 20,000*l.*

THE address of Mr. G. W. HASTINGS, M.P., the President of the Social Science Association, contains many subjects well deserving of attention. In speaking of the relation of the dwelling to national welfare, he said: How much, too, of health and wellbeing turns on the question of habitation. Look at the small, low rooms of former times, and consider what was the amount of cubic space in which even well-to-do people had to eat, sleep, and live in those days. Even at this time the supply of good dwellings for the million is a problem which society finds it difficult to solve. But the kind of house that can be built depends much on the conditions of ownership. Flimsy houses, made with poor material, ill-drained and uncellared, with scanty sleeping accommodation, houses intended to last only till they have defrayed the cost of their hasty and speculative building, are all that will be erected on a short or uncertain holding. Such habitations are evil for health and morals alike; they too often shorten the years and corrupt the consciences of those who dwell in them. So you see that when we are talking of tenures of land, of the transfer of real property, of the registration of title, and other such dry and legal things, we may be, and often are, speaking in reality of the wealth and health of nations, of the prosperity or perdition of whole classes—aye, and of the lives and souls of men.

ANOTHER subject introduced by Mr. HASTINGS was the importance of exhibitions of local art and industry. He said: It seems to me impossible to exaggerate the influence produced on the mind by the display of objects of art. Do not we all remember the hour when we first gazed on some masterpiece of creative genius? Was it not a revelation to our nature of something, perhaps blindly felt, but hardly understood before? Think, then, of the effect produced on those, the bulk of the people, who have few opportunities or none of wide travel, by collecting for their view, in an accessible locality, the art treasures of their neighbourhood. Why should not every county in England organise such a display, and educate its inhabitants to a knowledge of the industries and the taste that exist around them?

It is calculated that no less than eleven hundred dwelling-houses are now being constructed in Paris. In order to realise what this means, attempts at comparison with English houses must be put aside, for by far the greater part of these new buildings are of immense size—what the French call *maisons de rapport*—i.e., destined to be let out in suites of apartments, each of which is a complete dwelling in itself, so that the average number of inhabitants per building will be at least ten times greater than that sheltered by London houses. Notwithstanding this abnormal activity in the building trade, which has, moreover, continued for upwards of three years, the value of house property is rising every day. Taking at random a few instances from a list of recent sales in the French metropolis, we find that No. 62 Boulevard Malesherbes has just realised 1,200,050 fr.; No. 64, 1,030,000 fr.; the private residence of M. SECRETAN-OVERNAY, 59 Rue de Ponthieu, 1,500,000 fr.; and that of the Comte d'HAUSSONVILLE, 35 and 37 Rue Saint-Dominique, 2,900,000 fr.

THE Austrian Minister of Public Instruction has purchased for his Government M. FLAMENG's picture of the *Defence of Rorke's Drift*. This is the second time that the subject has been treated by a French artist, M. DE NEUVILLE having executed a work that has been exhibited with success in London and provincial towns.









NEW DINING ROOM - W





HURST PARK - SUSSEX.

Edward J. Taver  
des: 54. del: Marsh/82.

























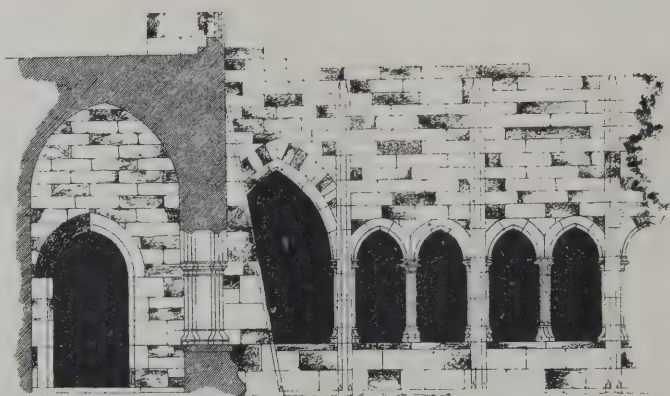




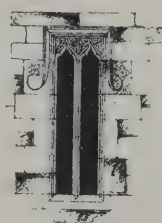
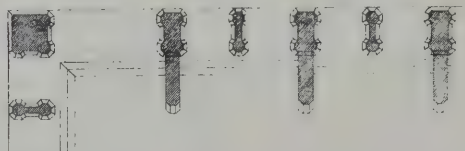
EAST ELEVATION



SOUTH ELEVATION.



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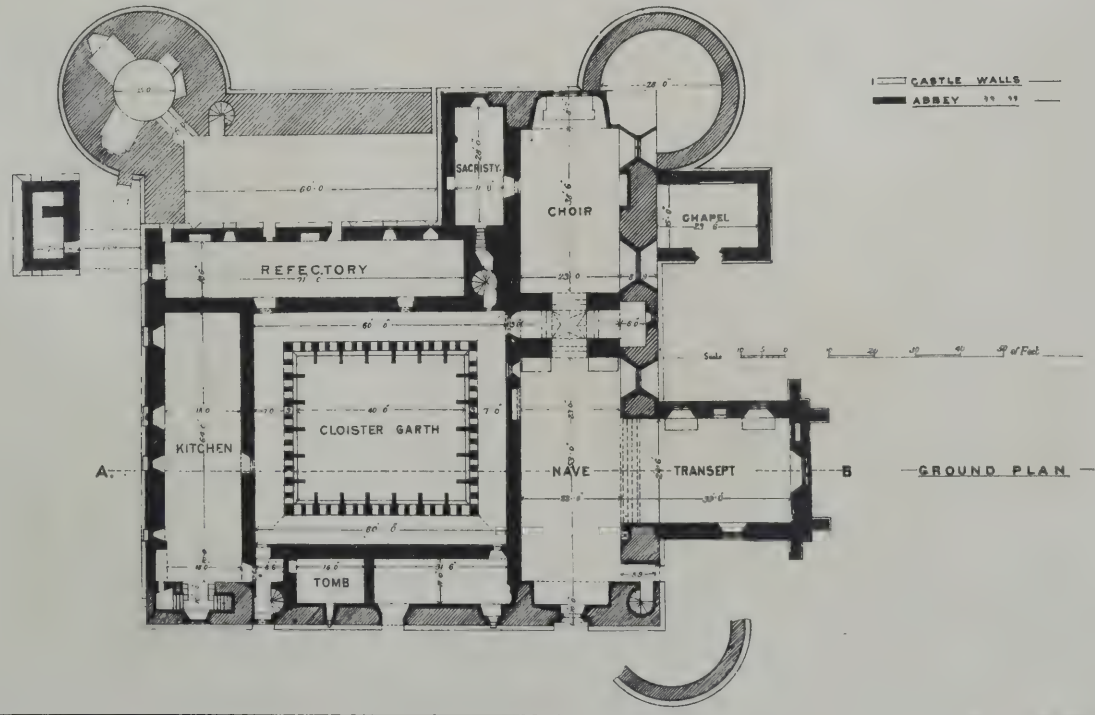




WEST ELEVATION.



SECTION ON LINE A.B.



CASTLE WALLS  
ABBAY WALLS

GROUND PLAN.







## ILLUSTRATIONS.

NEW DINING-ROOM, WADHURST PARK: THE SEAT OF  
MR. C. DE MURRIETA.

THIS illustration is reduced by the ink-photo process from a hastily-coloured drawing that was hung in this year's Academy.

Hawley Park stone has been selected for the chimney-piece, as it has a quiet warm grey colour that will harmonise with the internal fitting of a modern dining-room; and it is being sculptured by Mr. N. HITCH to represent events in the lives of SANTIAGO (St. JAMES Major), the patron saint of Spain; and of St. GEORGE, the patron saint of England; the central panel being devoted to the armorial bearings of the owner, a Spanish gentleman residing in England.

In the oak wall-panelling, a playful and (it is to be hoped) pardonable liberty has been taken with the "Ionic" volutes, by introducing little carvings of animals, flowers, &c., between them, no two being alike. As the room is 48 feet long by 24 feet wide, besides bay windows, these varied subjects, in which the carver has been left to indulge his fancy, will afford amusement without detracting from the respectability of the capitals.

E. J. TARVER.

BROADLANDS STABLES, NEAR ASCOT, BERKS.

THESE stables have been recently erected at Broadlands, near Ascot, for Mr. WM. QUILTER, from the designs of Messrs. CHRISTOPHER & WHITE, architects, 16 Bloomsbury Square, W.C.

The accommodation consists of an eight-stall stable, two separate loose boxes and standing for a pair of visitor's horses; coachhouse to hold three or four carriages and a drag; large harness-room, connected to stable by a covered way, the latter forming a place for harness cleaning; chaffhouse and corn-place, off stable, with granaries over; hayloft over coachhouse, with direct communication with chaffhouse; and general mess-room, &c., for the stablemen.

On the upper floor are rooms for the head coachman, which are so arranged that the windows completely command the whole of the premises and yard, and an interior view of the eight-stall stable. There are also two rooms for "helpers" over the archway entrance.

Owing to the fall of the ground a large potting-shed has been formed for the gardener under the coachhouse.

The whole of the foul drainage is taken to a tank for use in the kitchen garden.

Spring water is laid on for washing and general purposes, by means of a steam pump, from a deep well, which supplies the house as well as the stable; and there is a rain-water tank to supply drinking water for the horses.

The whole of the stables and yard are paved with EASTWOOD'S adamantine clinkers. The walls are of local red bricks, the gables being finished with half-timber work and brick nogging; and the roofs are covered with the Coalbrookdale plain tiles.

The work has been satisfactorily carried out by Mr. WATSON, builder, of Ascot, at a total cost of 1,691*l*.

QUIN ABBEY, CO. CLARE.

THE Abbey of Quin, which is one of the ruins in charge of the Commissioners of Public Works in Ireland, is about five miles from the county town of Ennis. In his report, as Superintendent of National Monuments, Mr. T. N. DEANE, R.H.A., gives the following account of the building:—

"The monastery of Quin was founded early, and was consumed by fire in 1278. In 1402 it was again founded for Franciscan friars by SIOGA CAM MACNAMARA, but Father WADDING places it at a more ancient date. Pope EUGENE granted license to MACNAMARA in 1433, to place friars of strict observance in this monastery. In the same year MACON DALL MACNAMARA, lord of Clancoileau, erected this monastery, being a very beautiful building 'of black marble.' The abbey was granted to Sir TIRLAGH O'BRIEN in 1583.

"The MACCONMARAS or MACNAMARAS were chiefs of Triocho Caed Hy Cassin, which territory is now the barony of Tulla, county Clare, and contained part of the barony of Bunratty. They were styled chief of Clancoileau from one of their chiefs in the eighth century. The MACNAMARAS held the office of hereditary marshals of Thomond, were powerful, and had numerous castles. In 1278 DONAGH, son of BRIEN ROE, defeated the son of the Earl of CLARE in the battle of

Quinchy. They burned the church on his people (the English), and put great numbers to death.

"The foregoing notes of the history of the abbey are necessary for the careful investigation of these most interesting ruins. We have three distinct periods mentioned—1278, 1350 to 1402, and 1433—EDWARD I., EDWARD III., and HENRY VI. Portions of the conventual buildings may be later.

"The ground-plan is partly etched in lines and part black. The etched portions are the remains of a fortress of considerable dimensions, Norman in plan and character. The black parts are fifteenth-century work, the "beautiful strong building of black marble." The eastern window is of late date. The southern windows of choir are thirteenth-century work, inserted in the centre of the curtain wall of the Norman castle. The western window is of same date, and the western wall of the original structure has been utilised by cutting it away in parts and inserting windows. One of the entrances to the keep still exists and opens into the church beneath the tower. The excavations that have been made have led to the discovery of a staircase in the eastern curtain wall of the fortress A on plan, a sub-entrance in the north-east tower, and other details in connection with the fortress. The foundations of very extensive outlying buildings of early date are discernible. Thus we have a curious question to solve—when was the fortress built and when was it destroyed? If its date was prior to the Norman invasion it is very remarkable as an indication of advanced military knowledge at an early time; if subsequent to the invasion of 1171, by whom was it destroyed? The defeat of Lord CLARE by DONAGH, son of BRIEN ROE, refers to a period not later than 1278, prior to which I place the building of the first abbey, and which must have been built on the remains of a fortress. Assuming that the fortress is of Norman origin, it would leave less than a century for its erection, destruction, and subsequent building of the earlier parts of the abbey. I have searched the authorities on Irish architecture and can find no nearer clue to the question than the dates already given. We have no evidence of such structures as this castle having been built by the O'BRIENS or the MACNAMARAS, the early chieftains of this portion of Ireland. We know that the Norman occupation penetrated very little into Clare."

The late Rev. J. L. PETIT read a paper on "The Abbeys of Ireland" at the Institute of Architects on March 23, 1863. In describing the Abbey of Quin, he said it was very perfect, and had undergone little mutilation beyond the loss of its roof. "It has," he said, "the large south transept and tall, slender, central tower, with arches not more than 8 feet wide, the width of the nave being about 24 feet. The roof of the tower compartment is groined. On the north side of the chancel, in the position generally assigned to the Easter sepulchre, is a tomb or shrine of three trefoil arches, apparently of a late date. In fact I did not notice any architectural features which might not belong to the fifteenth century. The cloisters are plain, and have small arches; some of the shafts have a spiral moulding. This abbey seems to have been fortified, as there are large round towers flanking on the eastern side."

Quin Abbey is, according to Mr. PETIT, an example of the Franciscan as opposed to the Cistercian type of monastic building, and which he considers to be peculiar to Ireland. The Franciscan plan, he says, "consists of a nave with or without a single aisle; a choir, generally without aisles, of much the same length as the nave; and a large transept on one side of the nave, to which transept is often attached an aisle nearly as large as itself. Between the nave and choir is erected a lofty tower, the lower part of which is oblong in its plan, reaching from wall to wall of the church; the upper part, whether square or oblong, is much narrower, and either rests upon arches thrown across the lower stage from east to west, above the main arches, or has its north and south sides carried down to the ground within the building (in which case they are mostly pierced by an arch), thus narrowing the entrance from the nave into the choir to a space not exceeding 8 or 9 feet. This tower always looks as if it were an insertion, and in many cases evidently is so, as it cuts windows and arches in two; but in later churches it is probably included in the design, and is of the same date with the rest. It seems to have been divided by several floors, and may very possibly have been occupied as a place of safety. The side of the church, which has no transept or aisle, forms a side of the



square of the monastic buildings, which are simple and well and regularly arranged. A cloister, of which the arches are very small, and usually pointed, and without foliation, surrounds the open space of the square. The ground plan is on the whole very compact. It may be remarked that the roof in general appears to have been supported by a gable at each end, and not to have been joined on to other roofs—at least where the main roof of the church was concerned, for even the transept has a gable upon the wall of the church as well as that at its end. The Franciscan abbeys seem generally to have had their monastic buildings on the north side of the church, but by no means without exceptions. The simplicity and straightforwardness of arrangement which prevails in these buildings is worthy of notice; unless the construction by which the tower is supported may be so called, we find no complicated architectural contrivance."

In the course of the discussion which followed the reading of the paper, Mr. GORDON M. HILLS said that Quin Abbey was a late Franciscan foundation dating from 1433. It exhibits the peculiar Irish cloister, the lofty slender tower raised upon the apex of two gables which cross the church, and which form at the base a partition between the nave and chancel, pierced only by a narrow communication between those parts. The walls which form the external faces of the Abbey are thicker and stronger than those which form the inside faces of its quadrangle, the south walls of the church being from 8 feet to 10 feet thick. The Abbey was fortified, but it was not quite so military as it looks now. The circular bastions were added in later times after the suppression of the monastery.

At the same meeting Mr. STREET said he ascribed the preservation of the large number of abbey towers in Ireland (such as that at Quin) to the admirable arrangement of the gutters. They were all of stone, and were as perfect now as on the day they were built. No lead was used, but the stones forming the bottom of the gutters had a channel cut in the centre of each, discharging the water through a succession of gargoyles, and then other stones were placed over the joint, so fitted that no water had ever got into those towers, though the gabled roofs with which they were covered had in almost all cases disappeared. This mode of construction, Mr. STREET said, afforded a good lesson to architects of the present day.

### THE EDINBURGH ANTIQUARIAN MUSEUM.

AN important addition, says the *Scotsman*, has just been made to the Museum of the Scottish Society of Antiquaries in the shape of a reproduction of a Celtic cross, recognised by authorities on the subject as a typical and peculiarly interesting example. The cross in question stands, and has stood from time immemorial, in the ancient churchyard of Kildalton, Islay; where, we understand, it attracted, some years ago, the attention of Dr. Arthur Mitchell as an object of special significance. It was sufficient to suggest that the characteristic features of such a relic should have a place in our national collection of antiquities in order to engage the zealous co-operation, towards that end, of Mrs. Ramsay of Kildalton; and to that lady the public are now indebted for a copy of the cross, capable of answering any practical purpose that could be served by the original. The cast has been made in Portland cement, by Mr. W. Stevenson, of the Museum staff, the process employed being somewhat similar to the ordinary method of reproducing statuary in plaster of Paris or metal. A highly satisfactory result would seem to have been secured, the duplicate showing with perfect accuracy the surfaces of the cross, with all their blurred and half-obliterated details of carving, and even such minutiae of texture as the crystals of felspar that here and there stand out in sharp relief from the generally rounded contours of the weathered gneiss. The cast has been well placed in the Museum, on a pedestal of the same height as the boulder which forms the basement of the original. The height of the cross from the top of the pedestal is 8 feet 9 inches, the width across the arms 4 feet 4½ inches, and the diameter of the circular glory 3 feet 3 inches. As was to have been expected, in an island where westerly winds are so prevalent, the face of the cross turned towards the west shows more weathering than that looking in the opposite direction. Yet the carving on the former face can be almost as easily traced out as that on the latter, owing, apparently, to its having been originally executed in bolder relief.

In the opinion of Mr. Joseph Anderson, the able secretary to the Society of Antiquaries, who has devoted special attention to this branch of archæology, the cross may be regarded as perhaps the best example of the best period of Celtic art in stone to be met with in this country. While chary of assigning an exact date, Mr. Anderson considers it to belong to a time when the art, in the absence as yet of any very definite influence from external culture, still remained pure and native; though probably it ought to be

placed about the commencement of the period when a process of degradation was about to set in. A notable characteristic of the work is a certain freedom and spontaneity in the execution, which denotes the hand of an artist untrammelled by technical rules, and giving scope in his craft to the play of a fresh and fertile fancy. There has been, for instance, no painful effort to secure perfect symmetry. One arm of the cross does not exactly balance the other, either in length or thickness; nor does the glory look as if its circumference had been nicely adjusted with a pair of compasses. The craftsman, in short, seems to have gone very much by the eye, making the form correct enough, yet still with that pleasant accent of variety which gives charm to a piece of hand-made Venetian glass in comparison with the hard precision of one that has been turned out of a mould. In its general effect the cross looks admirably proportioned; while the surface decoration has been applied at once with a fine eye for the effective filling of the space to be covered and with a feeling for the beauty of flowing curves, that has been efficiently seconded by the labouring hand. The sides of the cross are blank, and this would also seem to have been the condition in which the east face of the glory was left; for although, as has been said, this front looks less severely weathered than the other, the circular wheel shows here no such remains of tracery as it bears on the western face. The intersection of the arms and upright in the east aspect of the cross is marked by a large boss, which has evidently been formed of a number of animal forms, intricately interlaced; their limbs and tails growing outwards into elaborate tracery, which covers the whole surface of a circular panel, and is enclosed with what appears to have been a rope moulding. On either side of the circle there is carried over part of the arm a panel filled in with ornament, consisting of serpents twining about rounded knobs, that may or may not have been intended for apples. A similar panel extends downwards, occupying part of the upright; the corresponding space above the central circle presenting a couple of birds feeding on a bunch of grapes hung between them—an early Christian symbol of common occurrence in the Catacombs; and the panel above this again, which completes the height of the shaft, offering a quaint representation of David rescuing the lamb from the lion, surmounted by a couple of winged angels. In the spaces at the ends of the arms there appear, on one side, what may be taken for a rendering of Abraham and Isaac on Mount Moriah; on the other, a group whose meaning has not been deciphered, unless the seated figure, with uplifted hand, be blessing the personage kneeling in front. The lower part of the shaft shows, under the serpent tracery above referred to, a relief of the Virgin and Child, flanked with angels; and below this, a large panel filled with a familiar form of Celtic ornament—the double escaping spiral scroll, such as may be seen in, for example, the beautiful illuminations of the Book of Kells. So far as can be judged from their present condition, the curves would appear to have been designed and carved with remarkable spirit and freedom of hand. The edging of these lower panels has been a plain moulding, apparently passing, higher up, into a somewhat more ornate form. Turning to the west face, the lower part of the upright is found to be ornamented with a variation of the serpent and knob design seen on the other front, the general character of the decoration being similar to that of the cross called St. Martin's, at Iona. The surface is diversified with bosses, some of which present in front a hollow occupied by a ball—the largest one having one in the centre of the panel having three balls, which have been supposed to imply a reference to the Trinity. Higher up the ornamentation exchanges the zoomorphic form for that of expanding and escaping spirals interspersed with bosses. At the intersection of the shaft and arms there is a large boss, whose design cannot very well be made out, but which is surrounded with an intricate congeries of serpents that run into or open out of its forms, the circular panel thus occupied being enclosed with an interlaced moulding. Round the outside of the circle are placed at equal intervals four animal figures in high relief, the two set on the upright having their heads pointing upwards, and showing their backs to the spectator; the others, on the arms, being designed in profile, with their heads turned towards the central boss. The heads in every case are gone; but from what remains the animals might seem to have been intended for lions. Though rude in form, they are not without a certain appearance of vitality, and their limbs and tails develop into surface tracery. The outer panels of the arms show bosses surrounded with spiral ornament that seems to grow out of them; the same design with artistic variation appearing on the upper part of the shaft, where it is surmounted by two strange creatures treated in the true spirit of decorative art. The four quadrants of the glory show alternating bands of interlaced and fret ornament, and the whole of this face of the cross is surrounded with a well-marked rope moulding.

Along with this antiquarian treasure there have been received from Mrs. Ramsay several other casts of monumental stones. One is from a representative specimen of the later sepulchral slab common in the Islay district. Its surface shows in low relief a large sword, with reversed guard, and a pair of spears underneath, the scroll decoration being introduced in the bordering space. Another cast shows a rude stone, with no dressing except on one side, where it offers a rudely-sculptured representation of a Celtic



cross. A third produces a rough, unshapen slab, bearing an incised Latin cross; and a fourth, a slab cut into a simple form, and show the same symbol in low relief within a circle. These casts, one and all, seem admirably exact, and may therefore be studied with advantage by all who take an interest in our ancient native art.

### THE MEMEL TIMBER TRADE.

THE report of Vice-Consul Richter on the trade and commerce of Memel states that the value of the timber exported during 1881 was 500,340*l*. In 1880 the value of the timber was 544,850*l*.

The prices obtained were as follows:—

	Per Load, of 50 cubic feet.					
	£	s.	d.	£	s.	d.
Fir beams—						
Crown ... ..	3	5	0	3	7	6
I. Middle ... ..	3	2	6	3	5	0
II. " ... ..	—	—	—	2	15	0
Beams under 11 inches... ..	2	2	6	2	5	0
Beams for building ... ..	2	0	0	2	5	0
Pine beams ... ..	1	12	6	1	17	6

In expectation of the new arrivals selling cheaper some cargoes were contracted for at about 2*s*. 6*d*. per load under the above quotations, but the former rates were maintained afterwards, and about 12,500 loads of the new supply were shipped before the winter set in.

Fir sleepers sold at 28*s*. to 29*s*. per load of 10 × 10 inches and 8 feet 12 inches long. In autumn the freights by steamer were too high, but in November and December they declined, and then a considerable quantity could still be exported.

The business in fir and pine deals and planks has not been satisfactory. The sawmills, formerly all driven by wind, have nearly all been altered to steam mills, which of course can do a great deal more work. In consequence of the late arrival, and encouraged by the very good results of late years, the owners—not sufficiently bearing in mind that the larger trees in the Polish forests gradually have become scarce, and that in the floats many logs of smaller dimensions are now mixed up, which of course yield one plank or one deal less—anxious to secure, if possible, full employment for their mills, they paid high prices for fir and pine logs, hoping that the good demand for sawn goods would continue, but their expectations were not realised. Already early in spring large supplies were thrown into the markets from Norway and Sweden; the demand in England for 3-inch planks ceased, and prices declined from 7*l*. 10*s*. to 7*l*. per Standard I. middle. Even at the lower rate sales became very difficult, and it was a great relief that Holland became a purchaser for these sorts and in some way replaced the deficiency. For 1 and 1½ inch deals a moderate demand continued nearly through the year, relaxing towards the end of the season.

In spring the demand for oak wainscots was moderate, and 5*s*. 3*d*. per cubic foot crown, 4*s*. for I. brack was made, but in summer prices declined to 5*s*., later to 4*s*. 6*d*., and in autumn no more than 4*s*. 3*d*. for crown, and 3*s*. for brack could be obtained. Oak beams were dull, and only small lots were placed at 95*s*. to 100*s*. per load crown, brack 10*s*. less.

### LAND VALUATION IN IRELAND.

A NEW code of instructions to the Sub-Commissioners under the Land Act has been issued by the Chief Commissioners. It has been suggested by the recent change in the procedure by the appointment of seventeen official valuers, who will have a salary of 1,000*l*. a year each. Instructions have been issued to the valuers for their guidance in forming an opinion as to what a fair rent should be. The valuers will have simply the duty of advising the Sub-Commission on that matter; they will neither appear in Court nor take part in the judgments given. In future the procedure will be as follows:—A valuer will be attached to each Sub-Commission for the purpose of valuing the farms with one of the lay assistant-commissioners, who will afterwards hear the case in Court, together with the legal Sub-Commissioners, while the second Sub-Commissioner will in turn perform a similar duty with the valuer. The desirability is pointed out of having the cases on one estate heard, and the holdings valued, by the same assistant-commissioner. Subject to this recommendation, the Sub-Commissioners are left free to regulate their own business as they may think convenient. In cases where the valuers may be unavoidably absent, having to give evidence in cases with reference to which they valued holdings before their official engagement, the Sub-Commissioners may continue the old practice. The legal Sub-Commissioner may require the second lay Commissioner, in all cases in which he thinks it necessary or proper to do so, to visit and report on the holding. In cases where the persons may be absent when decisions are pronounced, the registrars shall notify the result to them. A form of order to be made with respect to the erection of labourers' cottages is transmitted to the Sub-Commissioners, together with instructions, diagrams, and specifications

issued by the Commissioners of Public Works. It is intended that any tenant applying to the Board of Works for a loan for the purpose of building labourers' cottages shall be supplied by the Board with all necessary information. Any tenant intending to build without a loan will be furnished with information by the secretary of the Land Commission. Complaints have been made by tenants generally that the Commissioners of Public Works will not lend less than 100*l*. The cause of complaint is now removed by a communication to the Land Commissioners to the effect that the Board of Works are prepared to lend any sum, however small, provided it is sufficient to carry out the order of the Land Commission Court. They recommend, however, that the Sub-Commissioners should name some adequate sum so as to leave a margin for contingencies and costs. They also point out, as an objection to the lending of very small sums, that the cost of inspection and other matters chargeable to the loan would be in a very high proportion to the amount available for expenditure, and they suggest that where a fair rent has been secured to the tenant for fifteen years on a holding large enough to employ labour outside his own family, the tenant should be able to incur the small expenditure necessary without assistance. The Sub-Commissioners are further instructed, when they make an order for the improvement of a cottage, to specify in detail as much as possible the extent and nature of the improvements to be made. These new instructions, it may be expected, will facilitate the business of the Sub-Commissioners and remove some of the complaints now made of delay and uncertainty in their proceedings.

The following is the list of official valuers appointed for the different counties of Ireland:—Antrim, Mr. John Wilson; Down, Mr. James Armstrong; Armagh, Mr. A. S. Deane; Tyrone, Mr. Thomas Roberts; Donegal and Fermanagh, Mr. James Magill; Cavan and Monaghan, Mr. E. L. Hunt; Leitrim, Roscommon, and Sligo, Mr. George Adamson; Mayo, Mr. John Pierce; Galway, Mr. Alexander Cruikshank; Limerick and Clare, Mr. Thomas Kidd; Kerry, Mr. Peter G. Griffin; Cork, Mr. William Evans; Tipperary and Waterford, Mr. W. C. Connell; Dublin, Kildare, King's and Queen's Counties, Mr. W. H. Gray; Longford, Westmeath, Meath, and Louth, Mr. E. G. Peet; Carlow, Kilkenny, Wexford, and Wicklow, Mr. J. M. Walker; Londonderry, Mr. Chas. James Greer.

### PUBLIC WORKS IN NEW YORK.

THE following particulars respecting some of the works in progress in the State of New York have been furnished by Mr. Consul-General Archibald:—

The Brooklyn Bridge is slowly nearing completion. Its opening for foot passengers and vehicles is promised before the close of the year. The bridge was commenced in January 1870, and its cost up to the present time has been about 14,000,000 dols. Probably 1,500,000 dols. more will have to be expended to complete it.

The following statistics in regard to construction may be of interest:—The New York tower contains 46,945 cubic yards of masonry, weighs about 124,000 tons, and its foundation is 78 feet below high water. The Brooklyn tower contains 38,214 cubic yards of masonry, weighs about 93,079 tons, and its foundation is 45 feet below high water. Both towers measure 140 feet in width by 59 feet in depth at high-water line. Each tower is 278 feet above high water. Height of towers from high water to roadway, 119 feet. Height of towers above roadway, 159 feet. Height of centre of river span above high water, 135 feet. The 21,184 wires composing the four cables, joined end to end, would cover a distance of over 14,357 miles. The promenade for foot passengers is placed in the centre of the bridge, with the railroad tracks next to it on either side, and the waggon roadways further beyond, next the sides of the great span. This promenade will be nine feet higher than the other thoroughfares, and the view of the river and the two cities from this part of the bridge will be very fine. It is intended that the bridge shall be lighted at night by electric lights. The grade of roadway, 3¼ feet in every 100 feet. Anchorages at base, 129 by 119 feet. Anchorages—height in front, 89 feet; in rear, 85 feet. Weight of each anchor plate, 23 tons. Main span of bridge, 1,595 feet 6 inches. Each laid span, anchorage to tower, 930 feet. Brooklyn approach to bridge, 971 feet; New York approach to bridge, 1,562 feet 6 inches. Total length of bridge, 5,989 feet. Width of bridge, 85 feet; width of promenade for foot passengers, 15 feet 7 inches; width for railway on each side, 12 feet 8 inches; width for carriage-way on each side, 18 feet 9 inches. The first wire run out, May 29, 1877. Cable-making really began, June 11, 1877. Number of cables supporting bridge, four. Diameter of each cable, 15½ inches. Each cable contains 5,296 parallel steel wires. Each single wire in the cables, 3,578 feet in length. Weight of wire in each cable, 1,732,086 lbs. Strength of each cable, 24,621,780 lbs. Total strength of the four cables, 108,487,120 lbs., or 54,243 tons. Permanent weight of bridge from anchorage to anchorage, 14,680 tons. Transitory load on bridge, estimated, 3,100 tons. Total weight to be supported, 17,780 tons.

The progress made during the past year towards the completion



of the Capitol at Albany has been satisfactory. The sum already expended on it is over 12,000,000 dols., and a further large sum will be requisite before it can be finished.

Owing to the nature of the ground selected as the site for the new Produce Exchange, New York, great delay has occurred in making a good foundation for the structure. But this having now been accomplished, the building will be proceeded with with all possible despatch.

The Hudson River Tunnel (Jersey City to New York) is being pushed forward energetically from both sides of the river, and its progress during the past twelve months has not been marred by any untoward accident, such as in the preceding year resulted in the loss of so many lives.

Owing to the long-continued drought last autumn New York suffered from a scarcity in the water supply, which caused much uneasiness and alarm to its residents. To provide against a recurrence, the Governor of the State has brought the subject under the special consideration of the Legislature; and in view of the large expenditure, estimated at about 12,000,000 dols. to 15,000,000 dols., which would be necessary for a new aqueduct, has suggested that the question should be referred, in the first instance, to a commission of inquiry, consisting of the leading citizens of New York.

### THE DRAINAGE OF MALTA.

SOME of the people of Malta have petitioned the Earl of Kimberley against the completion of the proposed drainage works. They say:—

We feel it our duty further to renew our protest against the unfairness of enforcing a system of drainage which the population in general do not approve; which they consider far beyond the means of the island to maintain in working order by means of fresh water, for want of a permanent and abundant supply, and ruinous to the best interests of the country if intended to be put in constant operation by the use of salt water, and therefore impracticable and inefficient, and likely to be injurious to the public health. And to repeat our sense of the impolicy in the determination of your lordship not to comply with our request to stay, until the matter is properly inquired into, the preliminary drainage works commenced in Valletta and Floriana; while we have already admitted, although our views have not been correctly understood, the absolute necessity of the continuous removal of all sewage matter from human habitations to a distant place where it can be disposed of without prejudice to health, which, we humbly submit, is the primary and sanitary object of every system of town drainage.

We beg to call your lordship's attentive consideration to the opinions of experienced sanitarians, such as Douglas Galton, Esq., C.B., late Director of Public Works and Buildings and Assistant Under-Secretary of State in the War Department; Dr. John Sutherland, Professor Dr. Parkes, and other eminent gentlemen, upon this social interest, bearing on the impracticability of the water-carriage system of drainage in Malta, and with regard to the advisability of adopting some other method instead, not only in the fortified towns, but in every inhabited locality all over these islands, to the great advantage of agriculture, which might be highly improved by the application of sewage to the land.

For this we have appealed, and after perusal of this and other papers already forwarded, we humbly trust your lordship will be persuaded that the petitioners are not against a practical, consistent, and economical mode of removing town sewage, and that they, more than the local authorities, are anxious to secure the general healthiness both of their towns, whether fortified or not, as well as of all the villages, hamlets, &c., and to see them restored to the comparatively satisfactory condition they were in at the time when Malta was renowned as the healthiest spot in the Mediterranean, which only the unskillfulness and repeated errors of military administrations have reduced to its present rather unsatisfactory condition; whilst the latter now insist on the enforcement of the impracticable water-carriage system of drainage as a panacea to remedy all the evils in this respect inflicted on these islands.

The Colonial Secretary in reply writes:—I regret that there should be any considerable body of opinion in Malta adverse to the principles upon which, after having recourse to the highest professional advice, and after very full examination of the measures recommended, it has been determined to carry out the comprehensive system of drainage of which the portion objected to is an extension. Her Majesty's Government contributed to this work from imperial funds an amount not far short of half of the total cost; the arrangement being that about 40,000l. shall be provided by her Majesty's Treasury and about 54,000l. from the funds of the island; and looking, on the one hand, to the urgent necessity for improving the drainage in order to preserve the health of the dense civil population as well as of the garrison troops, and, on the other, to the great benefit derived by the island from the very large annual expenditure on the imperial military and naval forces, it cannot, I think, be deemed unreasonable that a considerable portion of the expenditure in question should be provided from local funds.

### CHURCH BUILDING IN CARLISLE.

THE annual meeting of the Carlisle Diocesan Church Extension Society was held lately. The Society was founded twenty years ago, and the total sum expended on the objects of the Society since its first institution amounts to 48,973l. 3s. 9d. During the same time the amount arising from public and private sources together has reached 248,826l. 12s. 8d.; and the results of this combined expenditure are the building, restoring, or improving 98 churches, the building or improving 73 parsonages, and the augmentation of 103 benefices.

The Bishop of Carlisle, who presided, said that if there was nothing else in Bishop Waldegrave's episcopate to which they could look back with satisfaction, he thought the one great work of founding the Society in the diocese of Carlisle would be a crowning and admirable monument to that episcopate. He who entered upon the fruits of Bishop Waldegrave's labours should not be discharging his duty if he did not express upon this occasion as he had upon one or two occasions, his hearty thankfulness for that which he had done, and his full appreciation of the wisdom and the zeal with which he was animated. When one looked at the picture of the condition of things twenty years ago as drawn by Bishop Waldegrave, he thought it was impossible not to feel that the condition of things in the diocese of Carlisle was then very discouraging, and there was a great deal to depress anybody who looked to the condition of things round about him. But when he looked to the state of things now, as compared with the state of things then, he thought it was impossible to use the language which would exaggerate the satisfaction that one felt as to the change that had taken place. Of the places mentioned in the report that were in need of churches twenty years ago, there was only one place without a church—Ellenborough. That place was in reality an outlying township of Dearham, but it lay close to Maryport, was divided from Maryport by the little River Ellen, and it was in that unfortunate condition that it was a long way from its own parish church, and was nearer to the parish church of Maryport, to which, however, it did not belong. Hitherto it had been a problem which he had not been able to solve. He had been thinking about it—in fact, he had a plan about it. It had a school service; the people were not entirely neglected; but with the exception of Ellenborough all the other places mentioned had been supplied with additional church accommodation during the twenty years since Bishop Waldegrave made the speech referred to. The total sum expended on the objects of the Society since its first institution was in round numbers 50,000l., and the amount received from public and private sources had reached a quarter of a million, making a gross total of about 300,000l. That was really a remarkable result; but it did not by any means represent all that had been done. He could mention a number of churches that had been built with which the Society had nothing to do. Take, for example, those four churches at Barrow which he opened and consecrated in one day. They cost 24,000l., and the money came out of two or three pockets. That did not come into the accounts at all. He could mention a number of instances of the same kind. He thought they had a right to be encouraged by the past to look forward with thankfulness to the future. Speaking of the three purposes of the Society—the building and restoration of churches, the building or improvement of parsonages, and the augmentation of livings—he thought that the first purpose could never entirely come to an end, because population was always starting up in a diocese like this, with its great iron-fields here and there, and they might always expect that there would be calls upon them to help in erecting new churches. So far as the restoration of old churches was concerned, he thought they had very nearly come to the end of their work. He thought he could count the number of churches in a discreditable condition, and unsuitable for public worship in the diocese upon his fingers. That department of work, which was very much due to the neglect, of their forefathers, had nearly finished. As to parsonages, he thought he might say that part of their work was, roughly speaking, practically accomplished. Therefore in the future their work must very much be connected with the building of new churches and the augmentation of livings.

### AN AMERICAN EXHIBITION.

A NATIONAL Bazaar, Art and Industrial Exposition will be held in the rotunda and adjacent halls of the National Capitol at Washington, from November 25 to December 3, 1882, as authorised by joint resolution of the Senate and House of Representatives, August 7, 1882. The object of the exhibition is to raise funds with which to erect a statue in Washington to the memory of General James A. Garfield, late President of the United States. A committee of the Society of the Army of the Cumberland have already collected for the purpose about twenty thousand dollars, and expect, with the results of the exposition, to possess a sum sufficient to secure a worthy memorial. The art exhibition will be under the direction of Washington artists. It is expected that many artists and amateurs will each contribute one work as a gift to the fund, besides lending other works for exhibition.



## CHURCH BUILDING AND RESTORATION.

**Loughborough.**—A Baptist chapel has been opened at Loughborough. The chapel is built of brick, with stone dressings. The architect is Mr. J. W. Chapman, and the builder Mr. Moss. The heating apparatus was supplied by Messrs. Messenger & Co. Messrs. Hall executed the stonework; Messrs. Colman & Son the ironwork; and the plumbing and glazing by Mr. Simpson.

**Crewe.**—A new chapel and school are about to be built at Hightown, Crewe, for the trustees of the United Methodist Free Church. The chapel will seat 700 adults, and the school 250 scholars. Suitable vestries, classrooms, and outbuildings will be provided. The builder is Mr. A. P. Cotterill, of Crewe, and the buildings have been designed by Mr. S. Hurst, of the firm of Messrs. Maxwell, Tuke & Hurst, architects, Southport, and will be carried out under the architect's supervision.

**Southport.**—Extensive alterations and additions are being made to the Wesleyan Chapel, Blowick, Southport. The additions comprise six large classrooms, a library, and a detached lecture hall, &c. The builder is Mr. T. Duxfield, of Southport, and the works are being carried out from the designs and under the superintendence of Mr. S. Hurst, of the firm of Messrs. Maxwell, Tuke & Hurst, architects, Southport.

**Car Colston.**—The ancient parish church has been restored and reopened. The works of restoration have been carried out from the designs of Mr. Fowler, architect, of Louth; Mr. Rudd, of Grantham, being the contractor. The church consists of nave, with side aisles, chancel, porch, and tower, the style being fifteenth century.

**Whitstone.**—The parish church has been reopened after restoration. The work has been carried out by Mr. Wiffen, of Holsworthy, from the plans of Mr. Hooper, of Hatherleigh. The old Cornish barrel-roof has been reconstructed, the carved bosses of the old roof being retained. All the new woodwork is carved after work that remained in the old edifice. The chancel has been extended, and a new porch added, and the church has been re-seated and floored. The cost has been about 1,500*l*.

**Birmingham.**—The foundation-stone of All Saints' Church, Small Heath, has been laid. The building will be erected in the Early English style of architecture, simple in character, and with little ornamentation. When completed, it will consist of nave, with tower and spire at the north-west angle, north and south aisles and transepts, chancel, morning chapel on the north side of the chancel, and sacristies on the south side for the clergy and choir, with an organ-chamber over the latter. The footpace to the altar is to be raised nine steps above the floor of the body of the church. The exterior walls will be of red brick, with red Kenilworth stone mouldings and dressings, and the interior will be lined with white bricks, with red moulded brick arches to the nave; while for the transepts, chancel, windows, &c., Kenilworth stone mouldings and dressings and wilderness stone columns will be used. Provision is also made for Devonshire marble shafts to carry the roof principals. The first contract, consisting of the nave and north aisle, gives accommodation for 510. The architect is Mr. A. E. Dempster, and the builders are Messrs. Barnsley & Sons—all of Birmingham.

**Knighton.**—Heyope Church has just been reopened. The former church was of great antiquity, but alterations had so disfigured it that it would be difficult to fix its date. Traces have, however, been found of early Norman work, and probably this was one of the oldest churches in the district. The restoration has been carried out from designs of Mr. Pearson, R.A., London, by Mr. John Williams, builder, of Knighton. The church consists of nave, chancel, vestry, and tower with three bells; the chancel being divided from the nave by the old rood-screen in use in the former church. The sittings and roof are of plain oak, neither stained or varnished, and the floor of the chancel is paved with encaustic tiles. The church will accommodate about 200 people, and has cost altogether nearly 1,100*l*.

**Glasgow.**—The new church of St. Aloysius, at Springburn, has just been consecrated. The building internally is divided into three aisles, with open timber roofs, the centre one being of the hammer-beam type. The three aisles are separated by finely-moulded arches, supported on clustered columns. The organ-chamber and baptistry are at the south end of the building. The entrance porch has an arched stone ceiling, while the tympanum over it is relieved by a carved panel, representing the bust of St. Aloysius. The side windows have all been filled with tinted glass in square quarries, by Mr. Adam, of Waterloo Street; the large front window, the rose-window, and those of the baptistry and Lady Chapel having stained-glass windows by Mr. Hooper, of Bothwell Street. The contractors were:—Mason, Mr. Marshall, Bishopbriggs; joiner, Mr. Henderson, Grant Street, Glasgow; plasterer, Mr. Bradley, New City Road, Glasgow; slater, Mr. Muir, Springburn; plumbers, Messrs. Fyfe & Allan, Newton Street, Glasgow; iron gates and railings, M'Dowall & Stephen, Glasgow. The church will accommodate about 1,000 worshippers, and has cost nearly 3,000*l*, the architects being Messrs. J. S. Bruce & D. Sturrock, West Regent Street, Glasgow.

## SCHOOL BUILDINGS.

**Barnard Castle.**—A meeting of the governors of the North-Eastern County School was held last week. It was resolved, also, that the school be erected on land near the Bowes Museum on the east; and Mr. Watson, Canon Brown, and Mr. Richardson were empowered finally to purchase or exchange land necessary for a square enclosure twenty acres in extent. A long discussion took place with regard to the employment of architects, and the proposition to throw the design open to general competition was negatived, as were also motions to limit the number to six, and even one. Several names were mentioned, and eventually it was resolved that three architects only be invited to compete, and were thereupon balloted for—namely, Messrs. Giles & Gough, London; Mr. Armfield, Whitby; and Mr. Johnson, of Newcastle-on-Tyne. The next meeting of the governors will be held on November 24, and it is hoped that the foundation-stone of the school will be laid on Lady Day 1883. The successful architect will receive no premium, his remuneration being the usual percentage on the building. The two unsuccessful architects will be awarded 40*l*. each.

**Oldham.**—At a late meeting of the Oldham Board of Guardians Mr. Cooper, the chairman, said that plans for the proposed new schools had been examined and decided upon. The committee had recommended that the plan in the name of "Charity" was the best, and they recommended the Board to sanction its adoption, and it would be understood that the architect bearing this pseudonym should have the superintendence of the construction of the schools. The next best was "Oliver Twist," for which, according to the understanding, he would receive 30*l*. as a premium. The next best was "A.R.A.," who would receive 20*l*. premium as per arrangement. Mr. Shepley moved that the recommendation of the committee should be carried out. Each plan had features and recommendations which could not fail to strike those examining them. The architects gave estimates of the probable cost, which varied from 14,000*l*. to 7,000*l*. The committee had gone through the whole of the plans with care, patience, and impartiality. They had taken into consideration the ground-plans, dormitories, and other features, as presented by the different architects, and they found the whole a creditable production. It had, indeed, been no light task to come to a decision as to which should have the first and second prizes, but they ultimately decided that the plan under "Charity" should have the first. Mr. Dunkerley, in seconding, said he fully endorsed the remarks of Mr. Shepley. Mr. Whittaker, in supporting the resolution, said the committee were unanimous as to the position of "Charity" and "Oliver Twist" but they had some difficulty in awarding the third prize. Mr. Horrobin remarked that the plans were so excellent he was only sorry they could not give all the architects a job. It is understood that the author of the plans bearing the motto "Charity" is Mr. T. Mitchell, the authors of the plans "Oliver Twist" being Messrs. Wild & Collins.

## ENGINEERING WORKS.

**Harbour Works at Rio Grande.**—Some years since Sir John Hawkshaw, who professionally examined and reported upon all the ports of Brazil, gave it as his opinion that the nature of the Rio Grande bar required for its proper improvement that two long breakwaters should be built; and while he estimated the cost of these at 2,000,000*l*., he stated that he was unable to guarantee that the result would be satisfactory. In consequence of this report the improvements have been postponed. A plan has been prepared lately by Mr. Henry Gore, C.E., which proposes to remedy the defects caused by the bar of Rio Grande by an outlay of about 220,000*l*., or one-tenth of the former sum. The principal feature in the scheme is a breakwater about 6,000 feet in length, which would be mainly of timber, in order to utilise the resources of the province. It is proposed to construct the breakwater in the following manner—Two rows of square timber piles to be driven in lines parallel to each other, inclosing a space of 18 feet in its transverse section. The outer rows of piles next the sea to be of an average length of 30 feet and 12 inches square, with additional guide piles at every 10 feet. The inner rows of piles next the harbour to be 30 feet long and 10 inches square. The space between these rows of piles to be filled in with rubble stone, carefully packed, with special contrivances for preventing the stone backing from sinking unequally into the soft land or mud. Outside the rows of piles, both on the sea and harbour side, rough rubble mounds are to be formed, thus making a convex foreshore upon which the sea waves would partially break before reaching the breakwater. The two rows of piles are to be connected together by means of strong transverse beams and wrought-iron tie-bolts and iron straps; and the structure is to be further strengthened by strong vertical piles driven centrally between each transverse beam. From these central piles braces are to be carried to the outside rows of piles as a further means of support to the breakwater, and to afford additional resistance to the lateral force of the waves a series of strong additional piles is to be driven some 8 or 10 feet from the inner



row of piles on the harbour side; from the heads of these piles struts and diagonal braces are to be carried to the inner row of main piles, so that the transverse section of the entire structure will form a parallelogram 30 feet wide by the height from the sea bottom to the top of the timber bracing. As soon as the rubble backing between the rows of piles has become thoroughly consolidated, the space above it up to the top of the transverse timber beams and diagonal bracing is to be filled in with strong concrete formed of Portland cement and broken stone or gravel, thus forming a uniform level surface throughout the whole length of the structure.

**New Quay at Parkeston.**—Owing to the enormous increase in the continental goods traffic, the Great Eastern Railway Company have opened their new quay at Parkeston for the landing and shipment of merchandise somewhat earlier than they contemplated. The quay is so far completed that three berths are available, with a depth of water alongside of from 16 feet to 27 feet, according to tide. One of the warehouses on the quay is also completed and part of the station building. The company intend running two extra boats a week from Rotterdam, and extra boats as required from Antwerp, and they hope that the extensive accommodation afforded by Parkeston, where there are nearly five miles of siding already open, will enable them to work the increased traffic without any danger of a block, such as they have been threatened with at Harwich. For the present, the company's daily service with passengers to and from Antwerp and Rotterdam will continue to run to Harwich, but the booking office, first and second-class refreshment, waiting, and retiring rooms at Parkeston are so far advanced that it will not be long before the passenger traffic is also transferred to Parkeston.

### ARCHÆOLOGY.

**Roman Remains.**—In the latter part of last year the remains of a Roman villa were discovered in the village of Box, and acting on a suggestion that a portion at least should be bodily taken up, Messrs. Stier & Son, of Bath, have arranged for an exhibition of the most remarkable relics. According to the *Bath Herald*, the relics comprise a crescent-shaped bath, the sides and floor of which are laid with tesserae of white lias. Apart from its historic interest this may be considered a novelty, as the customary method was to line the bath with solid stone or lead. The pavement on view (formerly portion of a long passage) also is laid with tesserae, the white cubes of which forming the groundwork of the pattern are apparently white lias of two varieties, the one crystalline and having the appearance of marble; the cubes of the border and pattern are evidently of blue lias. Messrs. Stier & Son also show sundry specimens of pottery and ornamental brick, together with the bones and teeth of animals, all of which were excavated on the site of the villa. The bath and pavement are beautiful specimens of work. The remains will be shown in some of the principal towns.

### ART WORKMANSHIP.

**A Volunteer Medal.**—Sir Noel Paton, R.S.A., has prepared designs for a medal to commemorate the twenty-first anniversary of the establishment of the Volunteer Force. The following is the artist's description of the design:—"In considering the object of the medal—the commemoration of the twenty-first anniversary of the Volunteer movement—it appeared to me that the primary fact demanding commemoration was the loving loyalty of the Volunteer Army towards the illustrious lady whose lively patriotism and far-seeing wisdom led her to extend to them the protection of her august sympathy at a time when the organisation was looked upon with but scant favour by certain departments of the State. I therefore determined that the obverse of the medal should bear a likeness of the Queen; and having had, in 1863, the privilege of making a careful study of her Majesty at Windsor, which was honoured with her approval, I have adopted that valuable authority as the basis of the likeness. For the reverse—in accordance with medallic tradition—I have adopted a purely ideal treatment. Under the significant legend, 'Pro Aris et Focis,' and filling the centre of the composition, I have introduced the armed figure of St. Michael with flaming sword, as the patron of righteous warfare, his shield charged with the freely-rendered crosses of St. George and St. Andrew. On the one side, under the shelter of his outspread wings, is a group of a mother with a sleeping babe and a child in prayer, intended to symbolise 'Altar' and 'Hearth'; behind them a plant of the emblematic olive. On the other side, facing the sea, kneel three male figures in the attitude of defence, and with shields locked, symbolising the Volunteers of the three kingdoms. They are represented in civil dress, but armed with helmet and spear. Beyond these figures is a war galley, in allusion to the Naval Volunteer Service. In this way I venture to hope that, so far as is compatible with the limitations of medallic art, I have fairly embodied what to my mind is the animating idea of the whole Volunteer movement." The drawings were submitted for the Queen's inspection by Mr. Macphail, of Glasgow.

### GENERAL.

**The Duke of Albany** has consented to accept the presidency of the Parkes Museum.

**The Duke of Hamilton** has agreed to relieve the Bo'ness Town Trust of their obligations under the lease of the Town-hall, and the building and site are to be handed over to them at a nominal rent. The building, part of which has fallen, is to be taken down preparatory to building a new hall.

**Mr. C. J. Phipps**, architect, attended on Monday in support of an application made at the Leamington Town-hall for a licence for the new Theatre Royal. Mr. Phipps explained that the building had been provided with all the improvements now enforced in connection with the best theatres. There was a separate and distinct approach to each part of the building, so that in the case of a panic arising there would be ample means for leaving the building. The licence was granted.

**Messrs. Allen, Anderson & Co.**, of Alexandria, have received orders to erect an electric light in the Mex forts. The business of the firm was resumed on the fourth day after the bombardment.

**Messrs. Whitaker Bros.**, of Leeds, have obtained the contract for the new bridge over the River Tees at Stockton. The amount is 38,000*l*.

**Mr. F. Happersberger** has obtained the commission for the Memorial of the late President Garfield which is to be erected in San Francisco.

**An Appeal** has been published to solicit subscriptions for the restoration of the Castle Church at Wittenberg, Germany, the sum required being estimated at 30,000*l*.

**An Exhibition of Pictures** was opened at Leicester on Thursday in aid of funds for the proposed local art gallery.

**The Exhibition of Sketch Designs** for the Glasgow Municipal Buildings was visited during the eleven days it was open by over three thousand five hundred people.

**A Committee** has reported to the Bridgewater Town Council in favour of widening the town bridge at an estimated cost of 2,000*l*.

**Works** are being carried out on the River Bann, between Coleraine and the sea, for the construction of a deep seaport. The original estimate is about 65,000*l*., which includes the cutting of the bar in the river and alterations and addition to the quays.

**The Parish Church of Peel**, Isle of Man, the erection of which is now nearly completed, has been proposed for the new cathedral for the diocese of Sodor and Man, but at a meeting held on Wednesday the Bishop stated he was in favour of erecting a cathedral in Douglas if the necessary funds, say 50,000*l*., could be raised.

**The Building Fund** of the proposed Educational Institute at West Bromwich now amounts to 5,745*l*. It is estimated that about 10,000*l*. will be required for the erection of the buildings, &c.

**The Leeds Fine Art Exhibition** will close on Saturday the 30th inst.

**The Brighton Town Council** on Wednesday approved of a recommendation of the Works Committee to offer premiums of 200*l*., 100*l*., and 50*l*. for projected improvements on the sea frontage at the east end of the town. The scheme comprises a tepid swimming-bath with a water area of about 200 feet by 50 feet for men, a swimming-bath with half the water area for women, about fifty private baths for men, and thirty for women, with suitable adjuncts, conveniences, &c., spacious places for promenade and recreation, with shops for the sale of newspapers and refreshments. It is proposed, also, to construct terraces, promenades, embankments, summer-houses, sheltered seats, grass slopes, &c. The premiums will be awarded in February next.

**Kensington House** will shortly disappear, as the remaining materials were sold on Monday and Tuesday. The total amount of the sales in June and September is 10,451*l*., which is not 5 per cent. of the original cost.

**The Autumn Exhibition of Paintings** opened at the Brighton Corporation Gallery on Thursday. The collection, which includes 468 works, is one of the best yet exhibited there.

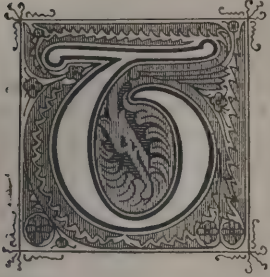
**The Statue of Louis XIV.**, in the Place Royale at Caen, is being removed by order of the Municipality, ostensibly as a protest against the revocation of the Edict of Nantes.

**The University College, Bristol**, is about to reopen for the session. The erection of new buildings, which will be completed before the close of the current year, will give increased facilities for the study of science. The chemical department now contains accommodation for nearly fifty students, and is thoroughly equipped with the latest improvements for teaching which are in use in this country or on the Continent. Lectures are delivered on pure chemistry as well as on certain branches of applied chemistry. The physical and engineering departments are also provided with facilities for laboratory work. A special feature of the engineering department is the arrangement by which students attending lectures at the College during the six winter months are enabled to gain practical experience during the summer months, when they work as pupils in the offices and workshops of leading engineering firms in the neighbourhood.



# The Architect.

## ARCH CONSTRUCTION AND THE ACCIDENT AT ST. PATRICK'S, DUBLIN.



THE disastrous fall of a buttress at St. Patrick's Cathedral in Dublin illustrates in a forcible and interesting manner what has happened many and many a time in the long process of dilapidation by which so many churches of the Middle Ages throughout Europe have gone the way of all architecture. For as "leaves have their time to fall, and flowers to wither at the cold wind's breath," so also the stateliest structures of human handling have every one in its turn to succumb to decay.

Compared with other modes of building, that which is developed out of the employment of the common arch is vastly more difficult to deal with than most of us suppose. An arch at the best, if an arch it really be, is but a pile of stones, judiciously poised so that every one shall support the others by the mere counterbalance of what is always a movable scheme of pressures. Let but a single member of this excitable co-partnership prove unequal to the task assigned to it, and down comes the whole fabric into irretrievable wreck. It is of no use to plead that the others did their duty well; the failure of one is the failure of all, and ninety and nine that need no repentance cannot save the whole hundred from the fatal consequence of the vice of one whose reconsideration is too late.

Theoretically the arch is a most clever contrivance on a most clumsy principle. It is the architecture of the smallest stones, with all its obvious disadvantages, animated by a vaulting ambition to which fate offers a thousand opportunities of o'erleaping its selle and falling on the other side. The simplest of all arches, and perhaps the most characteristic, is the archer's bow, if we suppose it set upright to carry a load. Let the string snap; the arch is gone. Let the string hold good, but the burden be injudiciously imposed; the arch, like a living animal under some distressful yoke, begins and continues to move, until at last, if it cannot relieve itself by accommodating its configuration to its distress, it must bend till it breaks. There may be no string—of course there generally is none—but the immovability of an abutment is only a still more treacherous principle; and when the bow is but a congeries of little stones (in full scientific theory these might just as well be so many little spherical balls, so delicate is the problem of adjustment), the chances of the whole contrivance, by some unforeseen accident of unequal pressure, flaking suddenly off into a cloud of scattered elements, are so disagreeably patent to the cultivated sense, that, like the great surgeon who held on by the area railings as he crept along London streets for fear his neck should break, such a one as an over-scientific architect—if he were not so rare a bird—might be excused for avoiding every arch he passed as he already avoids every ladder.

And yet we see people dealing with ticklish adventures of arched work every day as if there were something in the mere helplessness of the thing to which, as in the case of children and drunken men, a special providence proverbially concedes its particular protection. Men who have no more idea of the mathematics of the matter than a hod of their own mortar will trust themselves, and be trusted by others, to construct, to repair, to alter, to load and unload, to heighten, to undermine, and, in short, to perform all possible tricks of violence upon these touchy organisations, as if there were no mathematics at all in the world. In nine cases out of ten the most venturesome arching is designed, criticised, approved, and executed, with all the complacency of which ignorant human nature is capable, by nothing in the world else than "the look of the thing." And yet, we repeat, every stone in such work, as an independent factor in the production of a resultant, is a thing which by a little mistake may not only itself get into trouble, but bring the entire fabric down to ruin.

Such reflections as these may appear to some readers to be overstrained; but this is because the commonplace archwork of modern building is not worthy of the scientific appellation.

But when we happen to have before us the arched work of the Middle Ages the case is very different indeed. The intricacy of adjustment into which the application of the principle was rashly carried by the builders of those times is indeed marvellous to contemplate. Whatever some of our modern revivalists of mediæval work may profess to think of themselves, and occasionally of each other, there is not one of them, we may safely assert, who, with all the advanced mechanics of the nineteenth century at his command, could be persuaded to venture upon similar construction in anything like an intelligent manner with a calm pulse. The quantity of it which during the last six or eight hundred years has tumbled to the ground all over the length and breadth of Europe is scarcely to be computed. As an obvious rule, the more clever the design, the sooner will it collapse. A great deal of it has been kept together, as every traveller knows, by the deplorable expedient of iron ties, everyone of which is of course an open confession of original sin; and there is a great deal more in which the same measure must be resorted to, so soon as funds will allow and pardonable reluctance submit. The converse of this proposition is equally true, that the more clumsy the work appears the more secure it is; massiveness, in short, is the vulgar virtue which wears best because it tries the temper least, and the exquisite effects of airiness which so inexpressibly charm the beholder are the very hothouse blossoms of artistic grace whose fragile forms may at any moment bow their heads and perish.

In the case at St. Patrick's Cathedral the structure which gave way was apparently a massive wall-buttress, surmounted by its pinnacle, which had for its work to resist firstly the thrust of an aisle roof, and secondly that of a flying-buttress springing across the aisle roof to sustain in its turn the thrust of a nave roof. The manner in which the buttress failed seems to indicate that the adjustment of pressures was not so thoughtfully balanced as usual; for, if it had been, the failure of the wall-buttress would have allowed not only the flying-buttress to fall as it did, but the aisle roof also; whilst the fall of the flying-buttress must have let the nave fall. Indeed, if we are so far right, it is to the aisle and the nave that the attention of the City Engineer ought to have been directed immediately, and to the other buttresses perhaps not at all. At any rate, in the description of the process by which the structure was observed to give way, one feature which has been a good deal commented upon is the statement that the wall-buttress as a whole, while retaining its form, parted from the wall as if it had not been in the slightest degree tied into it, which it is argued (surely erroneously in theory) it ought to have been. If we are to understand that the wall-buttress, being undermined, toppled forward on what is called its "toe," as a perfectly independent structure, letting the flying-buttress fall perpendicularly on the aisle roof, whilst, firstly, the aisle wall remained upright and intact, secondly, the nave wall remained upright and intact, and thirdly, the aisle groining maintained its form in spite of the shock produced upon it by the fall of the flying-buttress, we cannot help asking the simple question—What was the use of all this buttressing?

The answer to this inquiry brings us to the fact that almost all arching is held together, not so much by the accurate calculation of forces, as by virtue of the adventitious strength of mortar joints, dowels, and cramps. Not that theoretical instability is permanently made secure by such means, but there is an additional strength thus conferred upon construction otherwise theoretically sound, the effect of which may be to delay its inevitable fate for a long period, even for centuries. In the case of St. Patrick's, if we are right, the roofs are in themselves theoretically unstable but practically safe by means of the help alluded to; while, again, the theoretical need for the wall-buttress and the flying-buttress has led to similar over-strength in at least the wall-buttress, so that, in fact, when failure took place, the flying-buttress was the only member of the structural series which, on the removal of its support, actually gave way as it ought to have done. All this, even if we should be a little in error as regards particulars, offers us a lesson upon arched construction which is well worth our attention.

Another lesson, which all the world can read, relates to the danger of that unintelligent and merely superficial underpinning which in many forms meets the practical surveyor at every turn. In this case the foreman of the underpinning masons, who fortunately was standing "quite convenient" when "the little bit of mortar fell down" which warned his men and him-



self to run for their lives, appears to have no less hazy notions about underpinning than others of his trade. It would be useless to dwell upon the details of this good man's account of his excavations, and of his insertion of a foot of new stone-work on one surface and then a foot on another surface, doing it "as well as could be done by the hands of a man;" he did his best, and so let it be; it is only surprising, to those who understand the matter, that the failures of underpinning, numerous as they are, are not much more numerous still. The mysterious influence irreverently called "sticktion" is truly a most valuable friend to many a bold underminer all over the country, and we can only hope that it may long continue to lend its friendly aid.

## AN ARTIST'S HOLIDAY IN SOUTH ITALY.

BY A CORRESPONDENT.

A SUMMER TIME in Italy, though not altogether popular amongst foreigners to that country, is, nevertheless, not one of the most unpleasant things in the world. Even in Rome, much maligned as the climate may be, a summer can be passed by the prudent with as much safety to health as in other towns of South Europe, for the confirmation of which one need only consider the fact that of the 300,000 inhabitants of that city only a small proportion leave it, and yet that it is statistically one of the healthiest cities in Europe. Indeed, Rome is only seen in its thoroughly Italian character in the summer months when the bustling foreigners are absent from it. Its antiquities may then be studied at leisure in silence and solitude, as is most fitting, when the spirit of the past seems to brood over its ruins and the imagination takes upon itself the office of *cicerone*. Pleasant excursions and short sojourns may be made to the nearest seaside bathing station, Palo; to the sulphur baths of the Campagna, the ancient *Aquæ Albulæ*; or to the Tusculan and Sabine mountains which bound the Campagna in an easterly direction. To those who would go farther many places unknown to the ordinary tourist are easily attainable, amongst the least frequented of which the little town of Sora, on the borders of the Abruzzi, where these remarks are written, is one. It has the advantages and disadvantages of being three or four hours from a railway station. Booking from Rome, one leaves the railway at Rocca Secca, a station about halfway between Rome and Naples, and taking the lumbering diligence of the country, a dusty and fatiguing drive, interesting withal, will place the traveller at Sora, situated at the foot of the Apennines, on the little river Liri, which takes smaller dimensions than its bed during the summer months. The interest of the journey thither must not, however, be quite passed over. The frowning old castle of Rocca Secca is not without an important name in history. The town of Aquino (ancient *Aquinum*), visible from the road, was the birthplace of THOMAS AQUINAS and of a Roman Emperor. Before reaching Sora a charming and remarkable little town is passed through, that of Isola, so-called from being situated on a mimic island formed by the Fibreno, which here unites with the Liri. It was here that CICERO had his villa, inherited from his father, the family belonging to Arpino (*Arpinum*), about three miles distant. This place was intimately connected with the personal life of the philosophic orator, and it was here that his recorded conversations ("De Legibus") with QUINTUS and ATTICUS were held. He speaks of it in terms of the greatest affection, and no wonder; for the spot has all the charms which Nature can give, rendering the assistance of art almost superfluous. Situated on the banks of the river are some very extensive paper-works founded by M. LEFEBVRE, and now amongst the most important in Italy. The grounds attached to the residence of the proprietor are exceedingly beautiful. They include one of the loveliest passages of the river, which, broken in successive falls, flows between picturesque banks shaded with foliage. It is skirted by lawns and rocks overgrown with luxuriant vegetation and penetrated by natural caverns half-hidden with straggling boughs and gnarled roots. It might have furnished to the poet his ideal of

Rivers to whose falls  
Melodious birds sing madrigals.

The painter, too, might select it as the very spot where the sylvan DIANA and her nymphs would assemble for a refreshing bath, shady and cool, at the midday hour. I asked

permission of the proprietor to allow me to return thither for the purpose of making some sketches, when, with true Italian politeness, he assured me that I was not only welcome to come, but that he should be honoured by my making use of his grounds whenever I chose. A little lower down the river are two fine falls, one over a perpendicular precipice 80 feet in height into a picturesque basin in the town, and the other over a series of rapidly-descending rocks.

Leaving Isola, the church of S. Domenico claims attention as occupying the site of CICERO's villa, of which some remains exist. The place has ecclesiastical interests also, for the famous HILDEBRAND, subsequently Pope GREGORY VII., was a monk in the convent here. Two miles along a straight road running between the richest vineyards, fields, and orchards, is Sora.

Of Sora it would require a volume to embrace its history in ancient and modern times, for surely never little town had so eventful a one. It was founded in unknown antiquity. One of the principal towns of the Volscii, it was taken by the Romans, the Volscians afterwards admitting the Samnite, who were also driven out. The Romans re-colonised it in the time of AUGUSTUS. Nor has its subsequent history been less stirring. In the middle ages it was robbed and plundered by the Lombard Dukes of Benevento, and governed or misgoverned by successive Lombard Counts. It was destroyed by FREDERICK II. After many vicissitudes it fell into the hands of the Popes under PIUS II. After being separated from the Church it was bought by GREGORY XIII. and bestowed on Don GIACOMO BUONCOMPAGNI, remaining in the possession of that and other powerful families until it became a part of the kingdom of Naples at the end of the eighteenth century. Repeatedly burnt and destroyed, it has always risen again from its ruins, from which the learned MORONI infers the high spirit of the people, which has never been crushed; the excellence of the site, which has never been changed; and the rich fertility of the soil.

Of the latter, at least, there is good evidence to this day. Stretching from the mountains, at the foot of which Sora is situated, the plain of the Liri is like a garden for miles. It is watered through the long summer heats by irrigation, the water being taken from the river by means of water-wheels driven by the stream, with buckets attached. The peasantry are active and well-to-do. Prosperity is apparent on every hand. Not less now than in the days of HORACE is the reserve of the poet to be admired whose acquisitive desires were not excited by such a territory:

Non rura, quæ Liris quæta  
Mordet aqua, taciturnus amnis.

Well, indeed, might JUVENAL assign it as the enviable retreat of an honest old age wishing to hide itself from a world of corruption. Its turbulent and belligerent history is also commemorated in the remains of walls of cyclopean structure, constituting the ancient citadel, and the extensive ruin of a mediæval castle which glares on the town from its rocky height. It is said that in laying the foundations of some recent buildings near the river remains of a spacious temple were brought to light, but hastily covered up to prevent the intervention of the authorities to compel the conservation of them. If such were the case, it is a thousand pities, as works of high value might have been found there.

Of architecture there is not very much that is important in Sora. The antique cathedral has been restored more than once. Only on its naked façade is a doorway of retiring arches worthy to be looked at, together with some disinterred sculptures and inscriptions built into the wall. Perhaps amongst the most ancient structures is that of the campanile of the little church of St. GIOVANNI, the church itself being restored in the most rapid manner. The campanile rises beside it, hoary and solemn with the impressiveness time alone can bestow, its depressed cupola sparsely covered with weeds and grass, like the few lingering hairs of old age. The town has been flanked with round towers in its more active days, now shorn of their strength and split with the wild fig and ivy which have forced their way between the crevices. Of course there are the usual quaint nooks and corners in some of the streets which hardly any town in Italy is without. There is one architectural feature of many old houses which may be worth a moment's notice: it is that of the chimneys. Often there is expended on these a simple ingenuity and tastefulness which is very pleasing. They are of many forms of design, from the funnel-shape of Venice to the miniature dome



or turret of central and southern Italy. A few bricks or tiles skilfully disposed, probably at the workman's own will and pleasure, are sufficient to produce an object which the eye falls upon with pleasure. A little collection of these designs, now fast vanishing in the uniformity of the modern style of building, might be worth preserving. If such a method were carried out in our towns in England, the dweller in the upper regions of the house would not have his eyes and taste offended by the hideous abortions which there meet his gaze in every direction, and if to this were added a decorative tile or a little good surface decoration, it might have a well-appreciated value to many a forlorn heart in the neglect of the attic.

Sora has even more attractions to the student of the figure than of the landscape. The men and women are mostly erect and well-formed. With the women the former is more especially the case, owing to the habit of carrying everything on the head, from a gourd or a water-melon to a baby in the cradle. This is done without any assistance from the hand. A pitcher of water is placed upon the head, inclining perhaps to one side or the other, but it is henceforward immovable. It is carried away with a quick and easy stride, and the head occasionally turned, without any danger of it falling. These pitchers are here of a very beautiful shape, either of earthenware or copper, probably retaining the form of the most antique times. The men also are fine manly figures, with the conformation of a good type and race. The good points of both the men and women are enhanced by their graceful and elegant dress, which is here unspoilt by modern alterations. The men during the summer months wear coarse but clean linen shirts, and shorts tied at the knees. They have long brown knitted stockings, with folds under the knee. The foot and leg up to the calf have a further covering of white linen, upon which is bound the sandal with straps passing several times round the leg. The sandal is generally made of prepared cow-skin, and is turned up at the toe in a pretty and piquant manner. The women wear the sandal also. Their dress consists of a chemise and low bodice, with lacings at the back and a rather short skirt of some home-spun material. It must be confessed that the gait of the women is rendered somewhat less pleasing, in spite of their erect carriage, owing to the habit of carrying heavy burdens on the head, which gives a rather awkward swing from the hips.

Specially was I interested one evening at the great annual *fiesta* of S. Domenico, held at the church before mentioned, two miles from Sora. Here the country-people assembled from miles round. Tents were erected, bivouacs improvised, and an universal bustle and energy prevailed. Here, as the night fell, would be seen a fire burning for cookery, about which were arranged groups worthy of the pencil of REMBRANDT; there the lover addressed himself to his mistress, who was too coy to listen to him, or perhaps she was offended with him for some unloverlike dereliction; beggars walked about, or stood asking alms, as if from the very paper on which CALLOT had placed them; country dandies dressed their hats with favours; every sort of vendor cried his wares with a loud voice. Most of all, I was interested in the church, which was quite scenic. At a raised altar the priest officiated amidst solemn music, whilst crowds of worshippers thronged for a sight of the relics displayed. It was hard to imagine one was not at some spectacle specially got up for its pictorial effect. Many prepared themselves to spend the night in the church, lying or reclining on the floor. Again and again the eye was arrested by these characteristic groups. A woman sat upon the floor, her hands clasping her knees, her face shaded by a projecting head-dress; serious and stern, her attention was fixed on the ceremonial. She looked as if a lifetime of emotion lay in her strongly-marked features. No Sibyl of MICHAEL ANGELO could be more impressive. A lame beggar leaned against a column, old and battered, with torn garments; RAPHAEL might have selected him for a model in one of his cartoons. Possibly our decadent art has lost something of the old epic character, in that such marked and individual types are no longer commonly seen.

Another evening my visit was enlivened by an entertainment of the nature of a ball given by myself and some artist friends, also staying there, in the garden of the hotel. To this were bidden several peasants who had served us as models, their friends, some dependents of the hotel, and others, to the number of forty or fifty persons. Coloured lamps were suspended beneath magnolia and oleander, whilst we sat under a vine-trellis to observe the spectacle. Two guitars and a mandoline had been engaged for the occasion; one of the guitar-

players being blind, with a certain uncanny leer in his sightless orbs. The *tarantella* was danced vigorously to a late hour by peasants who had laboured from dawn. Indeed the Italian of the south seems never tired of this exercise, no measure of exertion appearing to fatigue him. The entertainment was interspersed with dramatic performances highly characteristic. An assassination scene was rendered with great spirit and verisimilitude: a jealous lover stabbing his rival, who was mourned over in the most extravagant terms by his mistress. A grotesquely-dressed doctor was then called upon the scene, who would not examine the patient until his fee was paid. This produced a comical altercation between the friends of the man who had been stabbed and the doctor, in which a great deal of broad fun was vented freely. Of course it ended in the restoration of the patient and a general dance. Other buffoonery was gone through, something like our own old-fashioned country Christmas mummery. It may be remarked that the assassination scene probably gained its graphic character from the frequency of these encounters, two of them having happened within a fortnight during my stay. They generally arise in quarrels over wine or between lovers. Both the dances and dramatic scenes were more or less of a saturnalian description, and very likely had their origin in a remote antiquity. The entertainment wound up with an improvisation, two men answering each other to music in verse.

Another characteristic sight was the departure of bands of pilgrims to Loretto, two or three days' journey distant. They started with scrip and staff in true pilgrim fashion, singing hymns to the Madonna by the way. It was difficult to imagine one had not gone back to the Middle Ages—to the time when jolly old CHAUCER laughed with his pilgrims to Canterbury and told his stories gleefully. This pilgrimage, too, seemed to be considered a sort of holiday, and was certainly more like a pleasure excursion than a religious observance. We walked along the road a considerable distance, and were entertained by accounts of horrible brigandage—now, happily, extinct. Returning, we mounted a *charabanc*, the vehicle of the country, consisting of a springless cart with seats in it. The weight being too light on the horse's back, a little boy was called up as a make-weight. His delight was great. He sat in front of my friend, who playfully pinched his cheek. The little fellow looked up with a face quite radiant and said, "Grazie per la visita!" (Thank you for taking notice of me!)

Sora may be considered the portal of the Abruzzi, though not actually in that region. In the company of some pleasant Italian acquaintances, an excursion was made one day into the mountains to a little place called Balsorano. A terraced village was surmounted by an old castle suggestive of Mrs. RADCLIFFE and stories of mystery. The imagination of a DORÉ could not have portrayed anything more romantic. It was a showery day, and the lowering clouds embraced it as if for old friendship's sake. It formerly belonged to the PICCOLLOMINI family, but has been recently purchased by the wealthy proprietor of the paper-works at Isola, together with the title of Count BALSORANO. The castellano being known to my companions, we had a pleasant lunch there. It is an enormous structure, the exterior walls being twelve feet in thickness throughout. Its terraces are delightful, embracing fine views of the fastnesses of the Abruzzi and the valley of the Liri, here not much more in the summer time than a brawling stream. The castle is being fitted up as a modern residence by the present proprietor, it must be confessed not altogether in the best taste. A series of Gothic windows have been opened in the upper walls, which have a *bizarre* and injurious effect on the old structure.

One cannot help being continually struck with the strict conservatism and unprogressive character of the Italian race. If it were not for external influences brought to bear upon the people, there is little doubt that they would be at present in the condition of the Middle Ages. There is a singular absence of the reasoning power, or of its exercise, indicated at every moment. The oxen still labour under the awkward yoke resting on a single point of the spine. Every object of daily use is the same for generations. No change or improvement is made by the ingenuity of the people themselves. All the changes that take place are adopted from the outside. The use of a wheelbarrow, for example, is utterly unknown here. Every article, even to the manure carried to the fields, is borne upon the head. Just as their religious faith has been unquestioned ever since it was imposed upon them, so it is with all the economies of social and domestic life. From father to son



traditional modes are faithfully transmitted and received. The art of the preservation and repair of property is strangely wanting. At the hotel at which I am staying a large additional wing is in course of erection, and yet with every shower the water is allowed unnoticed to penetrate the ceiling of several of the rooms already inhabited. A remonstrance on the subject was only received with a shrug. This characteristic, it must nevertheless be confessed, adds considerably to the picturesqueness of their daily life. Their beautifully-shaped and tastefully-coloured pottery is much more pleasing than anything produced by the conventionalities of modern manufacture. Many things are to be seen which the utilitarianism of to-day would at once condemn and abandon. The saddle of their draught horses, for instance, is embellished with a bright brass pagoda-like structure, surmounted by a vane and pennant in the same material, quite imposing in its size. This and other graceful adjuncts only wait the incoming of exterior influences to be lost in disuse; and that period—one does not know if it is not really to be regretted—will arrive before many years are passed, with the construction of a new railway which will unite the region of Sora with the commercial activities that are now awakening in Italy by sheer pressure of surrounding energy.

### CULTIVATION OF THE FINE ARTS.\*

By GEORGE AITCHISON, A.R.A.

ALTHOUGH in the course of the next few days you will hear papers read on the different fine arts by those engaged in their pursuit, nevertheless it is considered expedient that some remarks should be made on the fine arts generally, on the causes that hinder or help their progress, on the means to be adopted to widen their scope, and, if possible, to heighten their aim, and also on the best means of spreading their influence amongst the people at large.

The fine arts are trumpet-tongued, and the mere mention of them stirs up within us a jostling crowd of emotions and memories inextricably connected with civilised man. All the eloquence that has thrilled our souls or fired our ambition, all the painting that has entranced us by its splendour of colour, all the sculpture that has fascinated us by its perfection of form, all the poetry that has enchanted our ear by its melody and rhythm and enthralled our minds by its beauty or passion, all the music that has stirred our blood or softly cradled our tired spirit, all the anguish and rapture, the tears and laughter, that have been called forth in us by the drama, all the architecture that has awed us by its vastness and its shade or charmed us by its dignity and grace—all point back to the fine arts. At the sound of these magic words, the Fine Arts, our imagination hurries us to Athens, and we thread our way amidst the faultless temples of Ictinus and Callicrates, see the sculptured triumphs of Phidias, hear the persuasive words of Pericles stilling the multitude; we listen to Socrates in the hour of the siesta, his apron and chisel laid aside while he is arguing with the young bloods; we make one of a crowd round a declaimer reciting Homer, or witness a drama of Æschylus, Sophocles, or Euripides. Or it takes us to Rome, where the hawk-eyed Caesar of imperial soul, in his white robe, walks pensively in the Forum, pondering on the decay of the Republic and the chances of his future triumphs; to Antony, revelling and swaggering; to Cicero, entrancing the Forum or the Senate. Or to later times, when Agrippa is building the Pantheon and Virgil is at his books, while Horace, on his stool at the treasury, is painfully casting up his ledger, not without letting his thoughts occasionally wander to the banquet he is going to at the palace, and the servile ode he is so carefully polishing, in the hopes that his fiery republicanism may be condoned by the crafty tyrant; where Livia plotted and Tiberius scowled, and where the lovely Julia charmed her crowd of lovers with her perfect dressing and her witty jests. Or to that Athens of modern times, Florence, where Giotto was building, sculpturing, and painting, and the grim Dante, deeply pondering the affairs of state or high poetry in some secluded by-street, had his gown wantonly smeared with the muddy boots of some gorgeously-dressed young noble who trotted past, and who learned too late that poets of Dante's calibre are awkward subjects for practical jokes. And then suddenly the quiet streets echo to the cries of a *white* or a *black*, and the painter throws down his brush and palette, and seizes his buckler and his falchion, the workman leaves his trowel or his chisel for the crossbow or the pike, mailed horsemen dash furiously down the streets, opposite palaces rig out their fighting-decks above the combatants, the great bell of the watch-tower clangs out the tocsin, and the podesta, the standard-bearer, and the trained bands march down to quell the tumult.

We can hardly picture to ourselves the present civilisation without the fine arts. Every emotion of the past, every past form of beauty, every past melody would be gone. How truly does Horace

say: "Brave men lived before Agamemnon, but they had no inspired poet to hand down their deeds." Without the fine arts all our present forms of beauty, all our noble struggles, all our passionate impulses would pass away into space, as our scientific men tell us that most of the energy of matter is dissipated into cosmic dust, and the passionate and rapturous side of man's nature must be left with empty yearnings, or at best be assuaged with some sort of transcendental enthusiasm, or with bloodshed or drink.

Fortunately for us we have inspired poets, who have given to us some of the same gifts as their mighty predecessors—"Odes, and jewels five-words-long, that on the stretch'd forefinger of all Time sparkle forever." We have admirable painters, who are striving to rival the giants of the Renaissance; we have sculptors who chisel for us with exquisite perfection the features of beauty or the lines channelled on the brow by thought, struggle, or command; we have written eloquence. Some writer said of George Eliot's "Middelmarch" that he read it but by little bits: its flavour was as exquisite as a choice liqueur that you only sipped, fearing to come to the end. We have spoken eloquence, though I have never had the good fortune to hear any of our great parliamentary orators, but I once heard Kossuth, in the Council Chamber at Guildhall, harangue the commonality on the wrongs of Hungary, and no man or woman who was there can ever forget that impassioned address, which at one moment raised them to the frenzy of enthusiasm and at another drowned them in tears: had instant war been his theme and muskets at hand, every man would have seized one and rushed to the front. We have exquisite musicians, and, I am told, admirable composers. Our architecture is improving, and architecture has been called "petrified music"; and we have acting.

Most of the dancing in Europe may, I think, be excluded from the fine arts and take its place amongst difficult gymnastics, though we may see amongst Greek bas-reliefs and vase paintings how perfectly dancing once realised its claim to be the poetry of motion.

I think I may say that all here cultivate, or at least are interested in, one or more of the fine arts, but what is now mainly wanted is that each person should endeavour to cultivate a taste for all the fine arts, so as at least to be an intelligent admirer of their excellence—firstly, for the sake of his own culture; secondly, for the public advantage, in choosing only worthy works; and thirdly, for the encouragement of the artist, so that he may receive his meed of praise; though I do not recommend the absolutely colour-blind to study colour, nor the absolutely music-deaf to study music.

The Greeks found that those who practised the five exercises were finer men than those who even excelled at one. We train every boy and girl in gymnastics, to give them the perfect use of their bodies, we try to train their intellect so that every faculty may have full play; if we systematically trained the will we should try and exercise every moral force, and we want equally to train the emotions and the sense of beauty.

The fine arts have been hindered, if they are not still hindered, by asceticism; if it be our duty to shut our eyes and ears to everything beautiful, not only to avoid, but even hate and loathe it, then we must necessarily cause the death of the fine arts; but I believe that, except at special times, really times of war, when we are fighting for some high principle, and must "scorn delights and live laborious days," it is not only not our duty to shut our eyes to the beautiful, but it is a positive disregard of one of the most important lessons Nature offers for our learning.

It seems to me that Nature silently points out that the contemplation of beauty in form, colour, and sound, is the true recreation of man, that if he will but partake of this banquet which she spreads without cost and almost everywhere for him, he will be both happier and more noble. She seems to me to say, Set yourself to unfathom my laws by patient and laborious effort, and I will give you health and riches, power and understanding; I will fill your mind with thankfulness and wonder, my forces shall be your slaves, and they shall toil for you—you shall have every bodily want supplied, you shall have delicious things to eat and drink, you shall even find things to cure sickness produced by your ignorance or by accident; but if you would have delight, look at the sunshine, at the sky, at the rivers and mountains, at the trees and flowers, enjoy the perfumes, listen to the birds and the waters. Nay, I will do even more for you, I will inspire those whose hearts throb with emotion at the sounds and sights of beauty, to fix for your enjoyment the fleeting beauties of the hour, and I will inspire them to create things which are more in unison with your apprehension than my own works.

The fine arts have, again, been neglected through the astounding discoveries in natural science, and the development of the applied arts. No fairy story, no vision of the poets has ever realised the marvels that have passed before the eyes of the few last generations. We have caught the lightning and weighed the sun, put a girdle round about the earth in forty minutes; no jin nor Marid ever did the work that the steam engine has done for us; statisticians tell us in how short a time Lancashire can weave calico enough to wrap up our globe. If a little gold found near the surface, or a few diamonds, will cause the emigration of the inhabitants of half a continent, eager to be rich with little labour, and

\* A presidential address, delivered in the Art Department of the Social Science Congress at Nottingham on Tuesday, September 26.



who are absorbed in that desire and in that search; what has been the rush of mankind to make use of the new powers and new machinery which have created more wealth than a hundred gold or diamond fields! How could mankind, in this struggle for power and gold, attend to those things which the casual observer would call the smaller amenities of life? It is like asking a man, amidst the clang, the smoke, and the madness of battle, to admire the landscape. And how can the sense of beauty be generally cultivated when each new wondrous machine is more hideous than the last?

Now as to the encouragement of the fine arts, the poet tells us that the poet is born and not made, and this is equally true of all the master spirits of the fine arts—nay, of those in every department of human greatness. We cannot, like the bees, make a queen bee out of any common worker by better air, better food, and more attention. We know that great poets, at least, only come after events which have stirred the emotions of a whole nation to their utmost depths: after great and successful wars for independence, after social convulsions, when the better principle has got the upper hand. But this alone is not enough; the budding poet must have to his hand the masterpieces of his art to study. See how Dante is always pouring forth his praises to Virgil for being his master and his guide, and Horace is urging the study of Homer and the Greek poets. Had Dante never read Virgil we may well imagine that he would have been but one of the ballad-makers whose works are now being unearthed for us by scholars. Where is Ennius?

There must, too, be a general passion for such a work, and a desire to honour the poet; he must have rivals in the art, to sharpen his desire for perfection, and such ease and leisure as may make the task not impossible.

Gray admirably sums up the causes of dumbness:—

But Knowledge to their eyes her ample page,  
Rich with the spoils of time, did ne'er unroll;  
Chill penury repressed their noble rage,  
And froze the genial current of the soul.

And yet perhaps the poet is more independent of circumstances than the great artist of any other art; his language is ready-made for him, his mind may serve both for a tablet and a storehouse, paper and ink are both cheap and common, and books "with the spoils of time" are widely spread; or else we might say that Burns was in the position of "some mute inglorious Milton." But these natural facilities are by no means available for the possible painter, sculptor, architect, musician, or actor. Many a shepherd lad who has drawn one of his sheep on a bit of slate has not, like Giotto, met with an appreciative Cimabue to carry him off to the very centre of art, to keep him, and to teach him: good examples of contemporary art must be spread broadcast over the country, and masterpieces of former times at no impossible distances; and for the poor student there must be opportunities of support as well as of instruction. The old monasteries supplied much of the machinery now wanting. A peasant lad could be taught in the school, and, if promising, could be kept and passed on from monastery to monastery till he became a pope, a cardinal, a bishop, or till he was fit to act as a minister of State or to become a great artist.

If heaven alone sends us the seed, we must at least see that it is not destroyed—that it has proper soil and water, sunshine and shelter, and some fostering care.

We will try and look at the actual occurrences amongst the great artistic efforts of the past. Heaven blessed the Greeks and the Italians with a piercing intellect and with artistic invention, and accident gave a scope.

After the Persian war Athens had to be rebuilt; the temples and statues of the gods had to be re-made; the nation's triumphs and thanksgivings had to be recorded by painting and sculpture, by poetry and music, and various lessons had to be enforced by the drama. When each Italian town had won its freedom, this had to be commemorated by a town-hall and a bell-tower. The bell-tower was the sign of freedom, and people who had won their freedom soon wanted to show the results of their successful industry; and above all the Church had to show its new energy, imparted by the teachings of St. Benedict, St. Dominic, and St. Francis, and it too allied itself with the arts, and was their greatest patron. In the North the nations had got new knowledge and new impulses from the East, gained during the Crusades, and the Church was as busy here as in Italy. In trying to find a roof that would neither burn nor fall, this marvellous, cloud-piercing style—the Gothic—got evolved, the most wonderfully scientific and inventive use of stone the world has yet seen, and it became grand, mysterious, and melancholy; rude carving and sculpture adorned it, and gorgeous stained glass heightened its interior effects.

It is only under enthusiasm that man attains his full height; and the only enthusiasms that have hitherto had a great hold on mankind are the religious, the patriotic, and the benevolent, though perhaps we are on the eve of a scientific one. Though all religions have made the future their goal, they have not been insensible to the advantages of enlisting on their side, and for their use, all the arts and sciences that were not in conflict with them. At one time all that existed of the drama was in their service, but since

the Church has severed this connection it seems strange that the State should not take it up. When properly conducted it has the greatest influence on manners and morals, and the State is concerned with the present and not with the future life.

The drama, in the hands of great and finished actors, is certainly the most striking and impressive of all the fine arts, though, like the lightning, "'tis gone ere you can mark its place;" we not only may hear the most sublime eloquence or poetry, but with the very accent and gesture of the person represented, and, though they be but minor accessories, with all the surroundings of scenery, all the gorgeousness of pomp, and with all the power of music in the interludes. If some inducement could be offered by which all our good actors now scattered about could be gathered into one company and work together, we might have the more impressive pieces of the past played with effect; and surely our own age is not so barren of imposing incident, deep emotion, or of genius, that we cannot find writers to embody this in worthy words; but they must at least have bread and honour.

How can we widen the scope of the fine arts? Although I speak with due reserve, I do not know that much more can be done in the case of books, though on the written fine arts I shall have something to say; but in many of the fine arts their scope is much restricted. How narrow is that of painting; and yet at the present moment it may be said to be one of the most favoured arts in England. Yet there is scarcely a public building that is permanently adorned with paintings of the more striking events of our history; barely a fine historic mosaic; and, as far as I know, not one outside a building. And yet the back walls of porticoes seem to call for them most vehemently; and as for sculpture, it can scarcely be said to have any scope at all, except in portrait busts and statues.

The highest triumphs in the imitative arts is to attain imaginative perfection of certain types. Now, man at his best, and under the most favourable circumstances, rarely comes up to our idea of bodily perfection; the pursuits, the surroundings, and the accidents of life have left some parts of the frame undeveloped, and caused other parts to be overgrown.

It was the discovery that ideal perfection must be sought that gave the crowning glory to the painting and sculpture of the Italian Renaissance, and this lesson was learnt by the aggregation of many Greek and Greco-Roman statues, bas-reliefs, coins, and gems, which showed the Italian artists that the Greek perfection of beauty was imaginative. And yet the Greeks had almost everything that could tend to the perfection of man's form: a climate in which clothes were scarcely needed for a great part of the year; the young men were daily trained naked in the open air in running, quoits, leaping, wrestling, and hurling, besides having to undergo their drill in arms; and everything too was done to promote beauty. Every man was taught music; it was looked upon as part of their moral training, almost a part of their religion; yet Alcibiades' excuse for not learning the flute was considered sufficient when he pleaded that it distorted his face.

Now, if we cannot expect the perfection of the nude figures of the Greeks, even if we do not desire it, the whole range of sacred and profane history is open to us for sculptured illustrations. Every town of Italy is full of sculptured friezes, every church of sculptured pulpits and fonts, tombs, doors, and tablets. We do not expect to find sculpture on the poor man's cottage, but we might hope that even a modest house might be adorned with one little bit of this lovely art. Civilised man should have some more feeling for dignity than to live in a house that is but a sort of aggregation of dog kennels, and would be scorned by a savage. I confess that the imitation Gothic now so rapidly passing away has had something to answer for. Though the real Gothic reached the highest pitch of inventive and scientific construction in stone, and embodied the taste and skill of its age, modern Gothic is but the reproduction of the taste of a semi-barbarous time, and cannot bear comparison with the refined productions of the best modern painters and sculptors.

About music, "that gentler on the spirit lies, than tir'd eyelids upon tir'd eyes," I will say but one word, and for this most cogent reason, that I am absolutely ignorant of it; but I am happy to say that my defect will be atoned for by a discourse on the subject by one who does, and the presence of my friend Mr. Statham ensures an able discussion. But I would beg all of you to reverse Lord Chesterfield's advice to his son, "If you love music, don't fiddle yourself, but hire a fiddler." All of us must have some indoor recreation, and the time will come to most men when failing eyesight makes reading irksome, and music is said to be the only fine art people will practise purely for their own delight: how much sweeter would it be to most men if they could delight themselves with the concord of sweet sounds than be driven unwillingly to whist or billiards.

How can we heighten the aim of all the fine arts? The answer is simple, but complete: let everyone heighten his own aim, and the thing is done. You are the public, from whose hands the artists are to receive sympathy, reward, and honour. If you are ignorant, vulgar, and commonplace, you can only delight in what is crude, vulgar, and commonplace too; if you are learned, refined, and high-minded, you will ask for work exhibiting knowledge, refinement, and a noble ideal. Recollect the truth of the line in



some peasant ballad of Italy, "Poverty does not destroy high feeling." We may well be proud of knowing that a nobler literature does not exist than that in our own language, from the sumptuous imagery of Shakespeare, the stately verse of Milton, where every word thrills us like the blast of a trumpet, to the exquisite music and pathos of the peasant-poet Burns. I defy any lines in any language to exceed in truth and simplicity, melody and plaintiveness—

Ye flowery banks o' bonnie Doon,  
How can ye blume sae fair;  
How can ye chant ye little birds,  
And I sae fu' o' care!

It is the true nobility of nature that pervades our race that makes the very highest literature equally admired by the Queen on the throne as by the poorest peasant: "One touch of nature makes the whole world kin."

Horace's maxim, that if you want your hearers to weep you must weep yourself, is true of every art. It is the intense feeling of a passionate nature expressed by the subtlety of skill that makes all true and noble art:—

'Twas partly love, and partly fear,  
And partly 'twas a bashful art,  
That I might rather feel than see  
The swelling of her heart.

In painting this master chord of Nature is sometimes touched, and then, though the beholder may be ignorant of the technical merit of painting, he is forcibly impressed. No one ever looked at Francia's Madonna mourning over the dead Christ, in the National Gallery, without tears coming into his eyes. Sir Edwin Landseer knew, loved, and honoured dogs, and his *Chief Mourner* is one of the most popular pictures of modern times, not in England alone, but amongst all civilised nations—you may see engravings of it in the shops of every capital in Europe; but, as a rule, both in painting and sculpture we must look upon anything that is the mere petrifying of a momentary emotion or movement as nothing but a feat of skill; beauty and calmness, dignity and composition, are much higher and more proper qualities, as the same action or the same expression is ever with us. The great Italian painters, when they painted a martyrdom, avoided the physical agony and dwelt on the seraphic calm and resignation of the saint, who was already tasting the delights of Paradise. We look for gorgeousness and exquisiteness of colour in painting as its peculiar attribute, and we also look for perfection of form and grace, and subtlety of composition, in sculpture and painting. If we want the expression of passion and violent action we look for it in the drama.

When we deal with genius in one line of achievement we may perhaps make an approximate scale, but we have no means of comparing different classes of genius with one another. To discover a natural law or the application of one, to invent a machine, to solve a great engineering problem, may require as much genius as to paint a picture or carve a statue, to write a poem or to compose an oratorio; so I shall not attempt to exalt the great architects above the great men in the other fine arts, but at any rate I know more about the difficulties of architecture than about those of any other fine art. A building has to be made convenient for its purpose, and to be securely built—both difficult arts, though perhaps not fine arts. It must be imposing, dignified, or graceful, before we admit it to be architectural, and yet the difficulties may be almost insuperable; to take a high rank, it must plainly declare its object, it must at all events not be mistaken for a class to which it does not belong, and moreover it must be in accordance with the tastes of the age. But what if the age have no taste, and only asks for a brick wall with holes in it—what is to be done then? You may point to many a fine front as a contradiction, but be sure that, however fine that front may be, if there be a back that only the owner sees, it is a plain brick wall with holes in it. If it were done for the owner's delight, he would be more anxious for the part he sees to be beautiful, than the part he rarely or never sees.

A real love for anything is the beginning of culture, and is a stimulus to the creative artist, but a pretended love is merely a blighting curse. To love plainness is the honest confession of insensibility; to love dignified or elegant simplicity is to love the very highest form of art. I would fain see every man having his own house built to meet his own requirements, both of arrangement and beauty, and not living like a soldier-crab in the left-off shell of someone else; and that he should at least have something put on it that is interesting to him, and have this done by a good sculptor or a good painter—an episode of his life, a family tradition, or something natural that he loves, be it but a dog, a cat, a sparrow, or a flower.

There is one thing we all desire, and which appeals not only to architecture, but to all the fine arts, namely, to have art classes of all large towns, not drawing schools only, but art itself flavoured by the genius of the place. As the French sometimes said in praise of one of their wines, "It smacks of its native soil, we do not want everything to have a London flavour." In Italy we have the Tuscan, Umbrian, Venetian, Lombard, and Bolognese schools, and even the Florentine and Sienese. And why should we not

have a school of Nottingham, of Birmingham, and Liverpool, York, and Manchester? Separate schools would cause a generous rivalry, which would not be without its effect.

There are two theories of government at each end of the scale—one in which government does everything and possesses everything, down to the penny steamboats and the apple-stalls; the other which confines it to external and internal police and the enforcement of contracts; and I think, as a rule, our prayer should be that of the French merchants, "Let us alone." Still there are certain things to be done and certain contributions to be made by all for the good of all, and this the Government alone can enforce.

Every Government should at least desire to have the people free, virtuous, and healthy; courageous, industrious, and happy. Doubtless the way of obtaining these six desirable conditions is being shown in the other sections, but we want more; we want every one of our people to be raised by the exercise and enjoyment of all his higher faculties, and for the sake of the nation we want all our human raw material to be worked up. When we use the word "free" as applied to costly things, we know that nothing is free but light and air, and few of us can get our due allowance of these; what we mean is, that they must be bought by national co-operation, every man paying his quota, and every one getting his full enjoyment. So I say we want free parks and gardens, free lending and reference libraries, free picture galleries and museums, and—I suppose the musicians will say—free music; and that these may be used and enjoyed by the bulk of the nation they must be open on the one day in the week when the people are free from toil. And I would add fine contemporary buildings and monuments enriched by the sculptor and painter. Such things stimulate emulation more than any number of triumphs of bygone days, and can be seen Sundays and week-days alike.

The Government does something for architecture when it picks out the best architect for a public building, and it did something once for painting and sculpture when it had the frescoes and statues at the Houses of Parliament executed; but, as far as I know, it has never done anything for poetry, for music, or for the drama. It must be a great incentive to excellence to have a poem declaimed, an oratorio played, or a drama acted before the assembled people, and with all the excellence and appropriate surroundings that a nation only can afford.

We have colonies and dependencies in Asia, Africa, America, and Australia, and nothing is more wanted than a means by which all these branches of the English race may be knit together. Our one national holiday is the Derby Day, devoted to horses alone. Is it too much to suppose that we might have combined with it for one week, and with the betting-ring suppressed, a festival to celebrate the highest achievements of men? If the ancient Greeks could do it, why could not the England of to-day?

## POPULARISATION OF ART.

THE first question set down for discussion in the Art Department of the Social Science Congress at Nottingham was—"In what way can the influence of Art be best brought to bear on the masses of the population in large towns?"

Mr. T. C. Horsfall read a paper in which he maintained that a strong love of beauty was, as a rule, gained only by those who in childhood habitually saw beautiful things, had many pleasant associations with them, and were taught to perceive their beauty by persons whose opinion they cared for; and of those who had gained sensibility to beauty, many lost it if they cease for a long time to see beautiful things and to think about their beauty. Many of the children who lived in large towns had no chance of becoming familiar with birds, flowers, grass, ferns, trees, or any other beautiful things; but most town children saw such things occasionally, and as they saw them chiefly on holidays, probably they had some pleasant associations with them. If love of art was to be common among the people of large towns, the slight acquaintance with beautiful things thus gained must be increased by the help of art. Good coloured pictures of common birds, flowers, trees, butterflies, country lanes, farmyards, coast scenes—that is, of the beautiful things and places which town children saw in town parks and when they go out of town—should be placed in every school, and the attention of the children should be directed to the pictures by brief addresses and by labels containing brief explanations, so that when they saw any of the things represented they might look at them more carefully, and come back to the pictures with more interest for having seen the things. There should also be pictures of historical incidents and places mentioned in the children's lesson books. To induce attention to and interest in art-methods, coloured plates and good woodcuts of the same objects should be placed side by side, and the differences in the modes of representing form and colour in different arts should be pointed out. Full descriptions of wood engraving, etching, and other processes, with all the appliances used in the processes, should be placed in an art gallery in the town, and the fact that they can be seen there should be stated on the labels attached to the woodcuts, &c., in the school collections. Each collection should contain a few examples of well-shaped jugs, cups, &c., which should have labels stating that



they are well shaped, and each school should have a large glass case for growing plants, and at least two casts from sculpture, showing what the bodies of men and women ought to be like. When chromo-lithographs were used in school collections each should have a label referring to a good picture of the same subject in the art gallery. The central art gallery ought to be opened on Sundays, and to induce workpeople to come to it often, music ought to be given in it on one or two evenings every week. As good art was essentially right beauty of appearance, if we wished busy people to care for it, we should show it to them applied to things which they care for. One principle of great importance was almost entirely disregarded by managers of art galleries. To make people take a keen interest in art we must show them things that really interested them. Judging from the language of many people, one would think they placed the greatest value on things the most worthless. Success in bringing the influence of art to bear upon the masses would only be attained by persons who knew the importance of art, and of the right appearance of the whole life, which was of more importance than what was usually called art. Rightness of appearance was of far greater importance than things which did not deeply influence human feeling. In the art gallery there should therefore be a model small house to show how a small house in town can be made to look pleasant, which should contain all the things which are needed in such a house, all well made, of good form and colour, and it should have on its walls a few good pictures. The gallery should contain a small collection of casts from the best Greek sculpture, and good examples of the products of all the industrial arts. Each should have a label stating that it is good, and, if this be possible, explaining why it is so. Some of the pictures in the gallery should represent the most beautiful places near the town, the most interesting buildings in and near it, interesting events in its history, the trees, flowers, birds, butterflies, &c., to be seen near it. Of pictures of this kind copies—photo-engravings, etchings, good chromo-lithographs—should be made. Framed examples of the copies should be shown in the gallery, and the price of a copy and of a frame should be stated on a label. Similar labels should be attached to other good etchings, engravings, &c., in order that workpeople may learn how many kinds of good art can be obtained at a small cost. Every picture should have an explanation of its subject, and if the subject be one which is not familiar to most people, its connection with familiar things should be pointed out. To encourage study of art-methods pictures should be placed side by side with etchings and other copies of them, and groups should be formed of representations by different kinds of art of the same subject. By the masses of the population acquiring a knowledge and love of art, we would obtain more and better designers. It was surely unquestionable that the knowledge and love of art was indispensable to our population. Religion was one of the strongest motives to resist temptation, but it behoved them to declare the truth that thousands must be incapable of just feelings unless they first felt the influence of art, unless by the help of art the beauty of the world could be brought within their reach. The masses required more interesting recreations for their leisure time. Till then he did not think any great change would take place in the way they spent their time.

A paper by Mr. Hodgson Pratt, on behalf of the Sunday Society, was next read. The author said that the available means of producing artistic influence will occur to everyone, such as galleries of sculpture, painting, schools of art, works of architecture, &c., but practically they were closed to the mass of the people. If the people were to be reached, those influences must be brought to bear on Sundays or not at all. For many years he had organised parties of workmen to visit museums, cathedrals, and galleries, under the guidance of men specially qualified to explain the meaning, history, purpose, and beauty of the objects exhibited. The visitors listened with the keenest interest and pleasure to such teachers and expositors as Sidney Colvin, Professor Owen, the late Dean Stanley, the Rev. Canons Shuttleworth and Gregory, Dr. Samuel Birch, and many others. In the name, therefore, of social and political justice—in the name of the true education and elevation of the whole people—in the name of religion as understood in its broader and noble sense, he called upon the Association to answer the question, "In what way can the influence of Art be best brought to bear on the masses of populations in large towns?" by supporting the Sunday Society in its beneficent work of opening to the working people of the country, on Sunday afternoon, the public museums, art galleries, and libraries.

Mr. Statham said that Mr. Horsfall had treated the subject methodically. With regard to accustoming people to the sight of beautiful and well-shaped objects, these were very wide terms; while it was possible to govern people too much. For instance, a society had been formed to supply, not the lower, but the upper classes with furniture which was warranted to be in correct taste. People might thus be led to accept a particular style as the only right thing; and they might be inculcated, not with general principles of correctness, but with the idea that Mr. Morris's, perhaps, was the only good furniture.

Mr. C. Hill denied that the opening of museums and galleries on Sundays was necessary. If paintings were refining, was not

music? Why, then, not open opera-houses and theatres? And then, where was the day of rest? A Continental Sunday would be the result, and work of every kind would be done. This was undoubtedly the tendency of opening museums on Sunday.

Mr. J. A. Jacoby maintained that to do practical good, art galleries and museums must be made popular with the working classes; and Sunday was the only day on which they had really leisure to visit them. He had perfect confidence in the ability of trades unions to look after the interest of working people, and to ensure that the Saturday holiday should not be withdrawn. Although the Nottingham Castle Museum had succeeded beyond expectation, there was a falling-off in the attendance of the working classes, which he attributed to the fact that they could not visit it on the day on which they had most leisure.

Mr. T. C. Hine dwelt on the influence which art might exert through street advertisements if they were well got up. People were not sufficiently ready to appreciate the connection between the good and the beautiful.

Mr. Rathbone said it would be unwise to burke the question. He objected to museums being closed on Sundays, because that was the working man's only day of visiting them. It was, in fact, as unjust to prohibit a man from going to a library or an art gallery, as to prescribe the particular place of worship he should attend. Referring to the importance of surrounding people with beautiful things, Mr. Rathbone remarked that a large calico-printer told him he was compelled to send his designers to Paris because the atmosphere of art around was necessary to keep up their ideas. The speaker submitted as a great advantage derived from museums and picture galleries that they placed before people representations of things, the mere description of which would be practically meaningless.

Mr. Judge supported Mr. Horsfall's paper.

Mr. Horsfall moved the following resolution, which was adopted:—"That this section recommend that the Council request the Science and Art Department to seek to acquire the power of preparing and of selling at cost price to persons or societies interested in public education representations of trees, birds, and other beautiful natural objects, good in respect both of fidelity to nature and of artistic quality."

The Chairman (Mr. Aitchison) said it was of the greatest importance to give to every person as much delight in this world as was consonant with fulfilling their duty in other directions. He was hoping to live until that day when people should be enabled to devote less time to providing the necessities of life, and more to the study of those things which art was taken to express. An old Italian peasant ballad said "Poverty does not spoil high feeling." Referring to Mr. Horsfall's plea for more beautiful things in schools, he remarked that he had not seen many beautiful things in such Board schools as he had visited, nor was such his recollection of his own schoolroom. He thought the Legislature might well expend a little more in embellishing schoolrooms. He did not think it was the nature of Englishmen to be deficient, as they were, in feeling for form and colour. He advocated drawing from natural objects, almost all of which were beautiful, and few of which were calculated to inspire a horror or repulsion.

## RESTORATION OF ANCIENT BUILDINGS.

ON Monday last "The proper limits of Conservatism in regard to the treatment of Ancient Buildings" formed the subject for discussion in the Art Section at the Social Science Congress.

Mr. H. H. Statham read the first paper. He said we lived in a time of what were called "movements," which were often followed more from fashion than from knowledge or conviction. Among these movements had been one for the restoration of ancient buildings, which had been followed by a reactionary movement condemning any kind of interference with ancient buildings. Twenty-five years ago it was thought a mark of "culture" to be eager for the restoration of ancient buildings; now it was a mark of culture to oppose all such restoration. What was the truth which lay between these two extremes? The mistake of the anti-restoration party lay in looking at buildings only in the light of their historical interest. This was very well in regard to that class of structures which were in actual ruin and the practical usage of which had long been given up. To such remains only could the anti-restoration principle—the "let alone" method—be applied in its entirety. But buildings not ruined and still in practical use had two other elements of interest—their artistic or architectural value and their practical utility. Architecture was a form of artistic design, and, a complete architectural design being necessarily rendered imperfect when any of its details had altogether decayed and fallen away, it was in accordance with reason to restore such details and, in so doing, to restore the original design. In regard to additions made in another style from that of the original building (such as "classical" additions to a Gothic church), it might be desirable to leave the additions when they were of high excellence in their own style; but when they were not so they were only excrescences on the otherwise homogeneous style of the building. Why was that



which was bad taste originally to be regarded with enthusiasm because it had existed for 100 years. It seemed to be quite forgotten that buildings were made to be used, and must be kept safe. Many of the anti-restoration zealots absolutely refused to believe any statement about the dilapidation of a building. When it was proposed, for instance, to put a new roof on St. Albans Abbey, persons who had never seen the old roof were ready to protest against the renewal as a scandalous proceeding, and solemn warnings were given against injuring the painted ceiling of the nave, as if this were a valuable relic of mediæval art. From personal inspection he could testify that the old roof was in such a condition that it was surprising that it had not been down in the church twenty years before, and that the painted ceiling was a coarse imitation of mediæval work, roughly painted on thin wood, which was rotting all to pieces. In the past ages of architecture there had never been any hesitation about repairing, altering, or even removing any old building when it was thought that improvement would result. There was hardly a cathedral in England of which some of the finest parts were not built on the foundation of a Norman structure which had been swept clean away because the architects of the thirteenth or fourteenth century thought they could improve upon it. Excessive sentimentality about old buildings was the result of a spirit of hopelessness and indifference about the present, of aimless brooding over the past, which showed itself in regard to other subjects besides architecture, and was a sign of a very unhealthy state of social and artistic feeling. Architecture, at least, was a thing of the present, not of the past. To renew and decorate such a building as a cathedral once in a century was as much a necessity as to repair, redecorate, and refurnish a dwelling-house which happened to be of old date. The Gothic revival had no doubt been itself a "craze"; the restorers had done some harm which could not be undone; but the movement did much towards putting new life into modern architecture and the subsidiary arts. The anti-restoration *régime*, on the contrary, did neither evil nor good.

A paper on Church Restoration, by Mr. Samuel Huggins, was next read. The author said that every ancient building, whatever its condition, ought to be conserved. When such a building became decayed it should be repaired, not "restored," which it could not be in reality. There was no such thing as architectural restoration; it was an architectural delusion. No man could recall the original design of a dilapidated ancient building in its pristine perfection; or if he could would be able to execute it for want of the mediæval craftsmen. There should therefore be no such committee as a Restoration Committee, which undertook a duty which was morally impossible. When an ancient building became decayed or cracked, let it be secured from further harm by every known means. Let any deeply decayed, unsculptured stone be replaced. If needful, let the highest engineering skill of the day be brought to bear upon it. If it could not be rescued from ruin by this treatment, it could not by the so-called restoration process, which was calculated to render it less secure than it was before by the deep cuttings necessary for the insertion of the numerous bonding stones, to unite the new to the old work. When an ancient cathedral was too far decayed for any repair to fit it for use, he would neither attempt to restore it nor pull it down, but supersede it by a new transept or chapel, and let the old building enjoy a sinecure. One advantage of this plan was that it would be the most economical course. He objected to the so-called restoration of ancient buildings because they ceased to be ancient buildings under the process. It was a mode of preserving them which destroyed that which rendered them peculiarly worthy of preservation. The varied historic interest of those buildings, which were the best exponents of the English mind of the most mysterious and interesting period of our history, and for some ages almost the only exponents of it, gave them, in addition to what remained of their architectural beauty, a charm which it was impossible to over-estimate. In this changing scene they seemed, by their durability, ordained as the only stable things on earth to connect the fleeting ages and generations of men; and, viewed in this light, they were absolutely priceless. He protested against any meddling with interiors, as being equally disastrous with disturbance of the exterior. He had no sympathy with any prejudice for or against any particular period of the Middle Ages, and protested against the rule that the monuments and ecclesiastical arrangements of the three last centuries should be removed or destroyed, which had been generally obeyed, and asked, "Are not these the foot-prints of Protestantism in England since the Reformation, and supports to the architectural and ecclesiastical history embodied in the buildings?"

Mr. T. C. Hine quite agreed with Mr. Statham that we were all too apt to run into extreme and exaggeration. His own idea was that there was in this matter a *via media*. He was in favour of preserving those parts of the church which represented the feeling—religious or political—of the day to which they belonged, and, as regarded the furniture, he would have it in harmony with the requirements of the day. As an instance of mistaken restoration, he said that a few years ago the old western front of St. Mary's, Nottingham, had been destroyed because it did not harmonise with the rest of the building. A Gothic front was substituted. If they had expended the money which that front had cost in the erection

of a grand organ chamber in the chancel, they would then not only have provided that which was really needed for the requirements of the day, but they would have avoided the hideous thing which was blocking up part of the east window, and would have preserved what was characteristic of the eighteenth century.

Mr. R. Denny Umlin protested at the suffering which they underwent at the hands of architects, who appeared so anxious to show their own ability that they showed a disregard for the ability of their predecessors. Restoration, he thought, was a wrong word to use. Reparation, substitution, might be more accurately used; but the word restoration was most inappropriate. Architects did not restore, and often they did not know what was the original condition of the fabric they restored. They might profess to bring back to us buildings built in the time of Edward I., but the building had been so patched since that they represented different periods of history. A structure which began with William Rufus and finished with Charles I. was a very interesting object. He strongly objected also to the habit of making churches brand new, and instanced Worcester, and to a certain extent Hereford Cathedral, which by their restoration were made too new, the impression on the spectator being that they were built a few years ago. He deprecated the destruction of the ancient parish church of Hull, which had been for so long intimately connected with the Brontë family, and of which only the tower remained. The proper course would, he contended, have been to build a new church half a mile from the old one, which might have been utilised as a parochial hall. He also instanced the old church of Tuam, which had not been pulled down, but which had been made into a lecture hall. In conclusion, he said it was the architects who dictated what was to be done, and the people followed like a flock of sheep.

Mr. T. C. Horsfall said in regard to the question of church restoration those who were not architects would be anxious to know the bane and the antidote. Either Mr. Statham, who advocated restoration, or Mr. Huggins, who opposed it, was right. Judging from their own experience, those of them who were not architects would think there was far more sense in Mr. Statham's statements than in those of Mr. Huggins. You could not repair an old building by erecting a new one. As to building a new church a mile or a mile and a half distant, it was not possible in the majority of instances to raise the money, and in the case of village churches it was quite impracticable. If we cared more for architecture than we did, the question under discussion would not be occupying their attention. As a people we were content to care very little for architecture, and thus they were discussing the question of the limits of conservatism as regarded ancient buildings. No nation with any love for architecture had ever hesitated to repair its old buildings in the style which best suited the wants of its age. Restoration, he urged, would not be properly conducted unless we looked upon the churches as a means of reaching the hearts of the people, and at present the usual services of the church left people entirely unaffected.

The Rev. C. Yeld said there was hardly a word in Mr. Statham's paper with which he did not cordially agree. Mr. Huggins' objection was that restoration destroyed the beauty of old buildings, and that a landscape-painter, for instance, would consider that a restored building would have no beauty; but for his part he believed that a landscape artist would make a better picture of a ruined mill than of the western front of Lincoln Cathedral, but it was known that in the opinion of Sir Gilbert Scott the whole west front would have been unsafe unless something was done. It had been said that restoration of the churches to anything like the grandeur they formerly possessed would unfit them for Protestant services. The steps taken for the restoration of St. Mary's would represent their fitness to Protestant services. The restorers had found out that the old choir stalls must give a dignity which was unfitting in a Protestant church. They were accordingly sold for 10*l.*—transferred to the church at Sneinton. Yet their exact counterpart was to be found in the new stalls in St. Mary's, which Sir Gilbert Scott said must be put in. In olden times men found certain features in a church which did not please them, and when they did so they made changes and alterations as they pleased. Mr. Yeld referred to the ancient Norman chancel of Southwell Minster, which was bodily pulled down to make way for the present chancel. In conclusion he contended that in making modern additions to a church you were simply adding to its history. He endorsed a great deal of what Mr. Statham said regarding the craze for preserving things because they were old, however old and ugly and useless the thing itself might be.

The Rev. Frederick Boeg said it was a fallacy that because a church was restored it thereby lost its historic interest or identity. It was assumed that its identity was lost if any change was made in the building. The anti-restorationists allowed the changes that nature made in buildings, then why not those made by man?

Mr. Rathbone confessed to sharing the feeling against restoration. He particularly deprecated the replacing of old carving by British workmen who did not understand what was the grotesque feeling of the old carving. For that reason he thought carving should be carried out with the greatest care and the greatest conservative feeling. He thought that the difficulties of the subject really lay in remembering that we did not live in the



past but in the present. If we were going to build in the same spirit as mediæval builders we would be meeting one of the pressing wants of the day. Instead of lamenting that we could not do anything equal to what already existed, we ought to set to work and see what we could do to imitate it.

The President, Mr. Aitchison, A.R.A., after observing that it was not unnatural that the discussion should have been confined to the question of the preservation of churches and places of religious worship, said these were undoubtedly places of practical utility. It was obvious that it was much more desirable that they should be preserved for practical use than that new buildings should be erected in their place. The difficulty was to find a building which had not been dealt with within the last forty years. They should seek the reparation of the old buildings as opposed to the restoration, and apart from reparation of the old structure and the arresting of decay, their great object should be not servilely to imitate what had been done by men of a previous generation, but to make additions of such a character as would harmonise with the structure of the church, while they would yet carry the characteristics of the day with them, each addition carrying its own character. In conclusion, he thought that every building should be a chapter of history carved in stone.

Mr. Statham, in reply, said he could not omit to make one reference to Mr. Huggins' paper. He agreed with him on the one point. He felt painfully as to the restoration of Chester Cathedral, which, under the hands of the restorationists, had been entirely recased outside, and made into a new church. He contended that the movement which revived the churches would always revive the buildings. Why, he asked, should they assume that modern workmen should do everything in a mechanical way, as might be inferred from what had been stated regarding the replacing of old carving. He agreed with the chairman, that their object in restoration should not be servile imitation, but the production of something which had a mark of our taste about it.

### THE PRUSSIAN SYSTEM OF TESTING MATERIALS.

A PAPER on "The Royal Prussian Institute for Testing Materials of Construction," by Dr. Hermann Wedding, was read at the meeting of the Iron and Steel Institute at Vienna on the 20th inst. The author said that the necessity of securing a *modus vivendi* between the producer and consumer has led in Germany to the establishment of three public institutes wherein it could be ascertained how far the chemical constitution of a material influences the mechanical properties. They were constituted and formed by law on January 23, 1880. Of the three institutes, two were occupied in mechanical examinations, the other being devoted to chemical tests. One of the mechanical institutes examined the strength of iron and other metals, as well as timber; while the other was engaged in examining building materials, such as bricks, lime, cement, &c. The chemical institute made assays and analyses in both directions. The management of these establishments was entrusted to directors, superintended by a commission under the presidency of the Under-Secretary of State for Trade and Commerce—viz., the head of that department whose duties were devoted to the equitable development of all branches of industry. Two technical members of the Ministry of Public Works, from the department for mines, smelting works, and salt works, and the department of railways and architecture, represented producers and consumers respectively; the third member was deputed by the Ministry of Culture, as the authority for technical education. Full freedom was allowed the superintendents in the carrying out of the experiments, the commission preserving the harmony of the three institutes, and giving impulse and direction to them. Regarding the work of the institutes, two groups might be distinguished, the first of which embraced the tests ordered by the State authorities and private individuals. These were made on payment, and to a great extent covered the work of the institutes. The second group included the examination of whole series of assays for the purpose of solving the question how the quality of the whole bulk could be ascertained with sufficient reliability from the examination of a small part of a material. It embraced experiments not connected with single cases of ordinary practice. The results here obtained filled up the void which inevitably remained in the results of the first group, and gave the scientific connection between the methods of production and the equality shown in use, a connection which really was the true end and aim of the institutes. In the prosecution of these series of experiments consisted the most important work of the commission. In this direction the work done could be ranged under four divisions—viz. (1) condition of the samples; (2) the method of testing; (3) the connection between the chemical and mechanical qualities, and the relation of the latter; and (4) the deviations from the quantities demanded in practice. The work of the institutes might be spoken of as small, but in so judging of it, they must not lose sight of the fact that these institutes had only been in existence a short time, and were working in fields which a few years ago were quite undeveloped, and partly even a complete *terra incognita*. In conclusion, he thought

it desirable that an international commission should be formed constituted of experts from all iron-producing nations, who should agree upon the conditions to be everywhere employed in testing materials of construction, and he should be glad if the idea was adopted as a proposal emanating from the Iron and Steel Institute.

Professor C. Roberts said that in view of the great progress that had been made in conducting mechanical tests, it was difficult to realise how comparatively recent such tests were. When the early work was done by Runt, Styffe, and Kirkaldy, chemists did not know what important factors one-tenth per cent. of carbon or 1-100th per cent. of phosphorus could really be, nor had the present era of molecular metallurgy dawned, in which the chemist shared with the physicist the responsibility of success or failure in the manufacture of iron and steel. He considered that in England the work might very well be left in the hands of private individuals, and pointed to the work done by Professor Kennedy at University College, London, as a proof that no other control was needed.

Professor Kennedy said that a Government institution for the testing of materials was not one which would find favour in England. The members of the German Commission could not themselves do the work, and there was no reason for supposing that the under-officials of a department, who would actually be responsible for the accuracy of the experiments, would be more trustworthy, more capable, or less open to undue influence than were private gentlemen under the present system. The originator of the present system of testing, to whose efforts more than to those of any other single man was owing the present great importance attached to testing in Europe, had worked throughout as a private individual, and the system inaugurated by him was that which would commend itself most in England. The advantages of uniformity were no doubt great, but there were also considerable disadvantages in the mechanical uniformity apt to be created when a Government department took in hand the execution of scientific work of this kind.

Mr. Snelus said that they must not draw conclusions from too few samples. On the other hand, it was difficult to insure that all the samples should be alike. As they had heard, differences in the material itself produce results far greater than differences in the mode of preparing the samples. As to the formation of an international commission, it was known that a manufacturer had one person telling him that his material should bear a tensile strain in 10 inches of length, another in 8 inches, and another in 2 inches. This made a great difference, and it was desirable that the international commission should, if possible, be carried out, and come to some definite conclusion as to the composition, the shape, and the length of the samples, and every other condition under which tests were to be carried out.

Mr. D. Adamson observed that chemical tests did not meet with the requirements of modern days, when the whole life of the structure, in a large measure, depended upon its ultimate ductility. In testing for practical purposes, they should test with the bar or plate. He believed the 2-inch test to be impracticable, and it would not form a proper guide. He did not wish all the testing machines to be the same, for it would be better to get results from different private sources, so that they might find out where their real difficulty lay.

Mr. Jeremiah Head said there was an advantage in having a public testing place. In the interest of the producer there should be some public officer who knew thoroughly what he was doing, and whose operations should be above suspicion. He was not, however, an advocate of Government testing, for the simple reason that Government had enough to do without undertaking works which could be done by other people. He suggested that the producers should name the tests to which the materials should be submitted, rather than the engineer under whom they were to be used up. If a technical committee of the Iron and Steel Institute were to draw up some test it would do good.

Mr. Lowthian Bell, the chairman, said there was nothing more embarrassing than the want of uniformity in measurement, and, therefore, any committee taking up the question of testing should also go fully into that of measurement. Testing was a question of a very complex character. They had not only chemical considerations but molecular structure, which might be altered and modified by a great many considerations and conditions. The temperature at which iron cooled, and the treatment to which it might be subjected had not yet received sufficient attention. Among engineers there was an opinion that railway axles cease being reliable in consequence of the distress experienced by long use. Mr. Menelaus, whose experience and judgment no one would venture to dispute, would not allow a fly-wheel to be made of steel in consequence of the great disposition of steel to be altered by long use; and he had been told that the large steamers constantly renewed their propeller shafts, and that the Atlantic steamers do not use their propellers beyond a certain number of years. Upon the North-Eastern Railway, of which he was a director, they made a point of examining every rail that broke, and they analysed specimens of all the rails which were taken up after a certain number of years. If a committee of the Institute were appointed he would be very glad to take out the analyses and give them every assistance in his power.



## NOTES AND COMMENTS.

PLANS AND PLANNING is the subject selected by Professor ROGER SMITH, for the public opening lecture of the courses of Architecture, Construction, and Modern Practice, at University College, London. This lecture, to which there is free admission, will be delivered at the College on Wednesday evening next, October 4, at six o'clock, and will be very fully illustrated. The work of the various classes, dealing with Architecture as a Fine Art, Architecture as a Science, and Modern Practice, will commence, as may have been learned from our advertising columns, the following week.

It is to be hoped that the Archæological Commission at Cairo will be reconstructed. Although it was but recently formed, the Commission has been the means of preserving the minarets of the gate called the Bab-el-Metwally, which had been officially recommended for demolition, on the plea that some stones had fallen from them into the street, to the danger of the people passing by. The minarets were examined, and were found to be perfectly secure. The stones which had fallen belonged to some Arab hovels which had been constructed over the gate. The Commission also reported on the condition of one of the mosques, which, although containing beautiful mosaics, is little known; but the political disturbances prevented further measures being undertaken to secure the building.

THAT a coroner's jury in Dublin brought in a verdict of culpable negligence against the architect and builder who were engaged at St. Patrick's Cathedral in Dublin, is enough to suggest the soundness of the conclusions at which we arrived in referring to the accident in our last number. The coroner himself took a common-sense view of the evidence; but a jury that was drawn from the slums in the neighbourhood of the building could hardly be expected to do otherwise than seek vengeance on the officials. In the opinion of the leading Dublin architects the responsibility does not rest with Mr. FULLER. It would be impossible to discover whether the buttress was equal to the work, inasmuch as the stone groined arch of the choir with which it had been connected was removed years ago, and lath and plaster substituted. Mr. FULLER has loyally endeavoured to shield the builder from what is in reality an outbreak of popular fury, and we hope that he may not have to suffer in consequence. If actions for damages follow, it will be unfortunate, unless a different class of jurymen is empanelled.

THE French Ministers of Public Works and War have decided to demand of the Chambers the necessary funds for effecting an exhaustive series of levels of the whole country, an accurate contouring being absolutely necessary for the execution of the schemes of public works and national defence now being carried out or projected. The only survey of the kind available is that made by the Staff Corps between 1857 and 1864, which stands in need of correction and completion. It is calculated that a catalogue of the levels of each department may be included in one large volume. This is to be completed by a graphic repertory, in which every standard point or bench-mark will be shown. In the preparation of the levels the existing Government survey for valuation purposes, reduced to the scale of one ten-thousandth, will be used; and at the same time the War Office will be able to perfect and complete its maps of France on the one fifty-thousandth scale. The cost of this vast undertaking is put at 19 million francs, but it is probable that the burden upon the State will be considerably lightened by subventions from the departmental and communal authorities.

It is generally supposed that the Rue Lafayette is much the longest street in Paris. This notion has doubtless arisen owing to the street being straight throughout, and therefore impressing its length upon the observer; that it is erroneous may be seen by the following list, taken from a work lately published by the municipal authorities:—Rue des Pyrénées, 3,515 mètres; Boulevard St.-Germain, 3,150 mètres; Avenue Daumesnil, 2,930 mètres; Rue de Rivoli, 2,850 mètres; Rue Lafayette, 2,789 mètres; Boulevard Péreire, 2,540 mètres; Avenue du Trocadéro, 2,440 mètres. On the other hand, the shortest thoroughfare in Paris is the Rue Brongniart, near the Bourse, which is 23 mètres in length, and contains only two houses, one of which is in course of construction.

THE contracts for marbles, stoves, heating-apparatus, and paving-work, for the new Hotel-de-Ville in Paris have been let by public tender. In the interior, and especially for the grand staircase and Salle des Fêtes, white veined Carrara marble will be used in profusion, and numerous large columns of the Royalked marble of Flanders will relieve the prevailing absence of colour. The grand staircase will have 100 steps—each 5 mètres long by 40 centimètres in width—of Carrara, the total estimated cost of these being 1,600*l.*, or 16*l.* per step; moreover, on the same staircase are to be erected four red Flanders columns at 84*l.* each, sixteen Carrara columns at 14*l.*, and sixteen pilasters at 10*l.* The flight leading to the apartments of the Prefect of the Seine is designed to consist of fifty-four steps (3 mètres long) in pure white marble, which will cost 10*l.* apiece.

ONE hundred and ten ordinary marble mantelpieces will be erected in the various rooms on the first and second floors of the building; fifteen of a more elaborate kind for the principal apartments of the Prefect of the Seine and the offices of the Municipal Council; four extremely large for the chief rooms of the first floor; and, finally, two of quite monumental dimensions, to cost 840*l.* each, for the grand salons. The granite pavement of the two main courts and various outside passages will cover an area of 1,703 square mètres, calculated at about 16*s.* per mètre. In round figures the cost of the marble work may be put down at 22,000*l.*, the heating apparatus 1,000*l.*, and the paving 4,800*l.*

AN exhibition of works by the students of the Villa Medici (who have gained the Grand Prix de Rome) will be opened on October 15 next, in the Salle Melpomène at the Ecole des Beaux-Arts. It will remain open to the public for eight days, from 10 A.M. to 4 P.M.

M. MASPERO, the Director of the Boulak Museum, started on his return to Cairo last Tuesday, with the intention of continuing his researches and excavations in the Nile Valley. Previous to his departure he read a paper before the Académie des Inscriptions, describing the discoveries already made under his direction, particularly in the pyramids of Rega, Kafr-Litch, and Meïdoun, and at Thebes, where he has recently unearthed the tomb of Queen NITOCRIS, of the twenty-sixth dynasty, whose sarcophagus will shortly be removed to the Boulak Museum.

THE "Loan Collection" of the Ecclesiastical Art Exhibition, which will be held in Derby during the Church Congress week, is much larger than last year, and embraces upwards of 400 separate exhibits. Embroidery, both ancient and modern, is largely represented. There are numerous specimens of modern work, including sets of vestments from Prestbury, a cope worked for St. Clement's, Bournemouth, and an altar frontal, cope, and dalmatic, by Messrs. JONES & WILLIS; the two last having been shown at the Great Exhibition in 1851, when they received a prize medal. Modern embroidery is also well represented by specimens of the work of the East Grinstead Sisterhood. Metal work and enamels form an important branch of the collection, and include *champlevé* work of the twelfth century, bronze plaques, Græco-Roman bronze crosses and crucifixes, together with a triptych and a pectoral plate in bronze and enamel. There is a brass crucifix of uncertain date, found built up in the wall of a Derbyshire farmhouse. A paten, dated 1490, belongs to Stow Longa Church. Mr. BERESFORD HOPE contributes a painting of the interior of Westminster Abbey, showing the marble altar piece put up in 1705 on the advice of Sir CHRISTOPHER WREN, in which the altar is represented with a crucifix and seven candles. The gem of the collection is without doubt the model of the Shrine of St. URSULA, the original of which is at the Hospital at Bruges, and is the work of HANS MEMLING. Pictorial art is represented by various photographs and chromolithographs of ancient pictures, illuminations, drawings of churches and ecclesiastical furniture, engravings of chalices, and a large collection of rubbings of monumental brasses and incised slabs. The Rev. J. FULLER RUSSELL sends a very interesting and valuable collection of manuscripts and early printed books. Amateurs of ivories and wood-carving will find much to admire in Mr. CLARK's collection, which includes about a hundred examples of plaques, statuettes, triptychs, caskets, &c., mostly belonging to the sixteenth century; and there is a situla or holy-water vessel dating from the eleventh century.









Sprague & Co. 22, Martins Lane. Cannon St. E.C.

SWIMMING BATH, FONTHILL ROAD, FINSBURY PARK. N.

J. J. BENNETT, ARCHT.







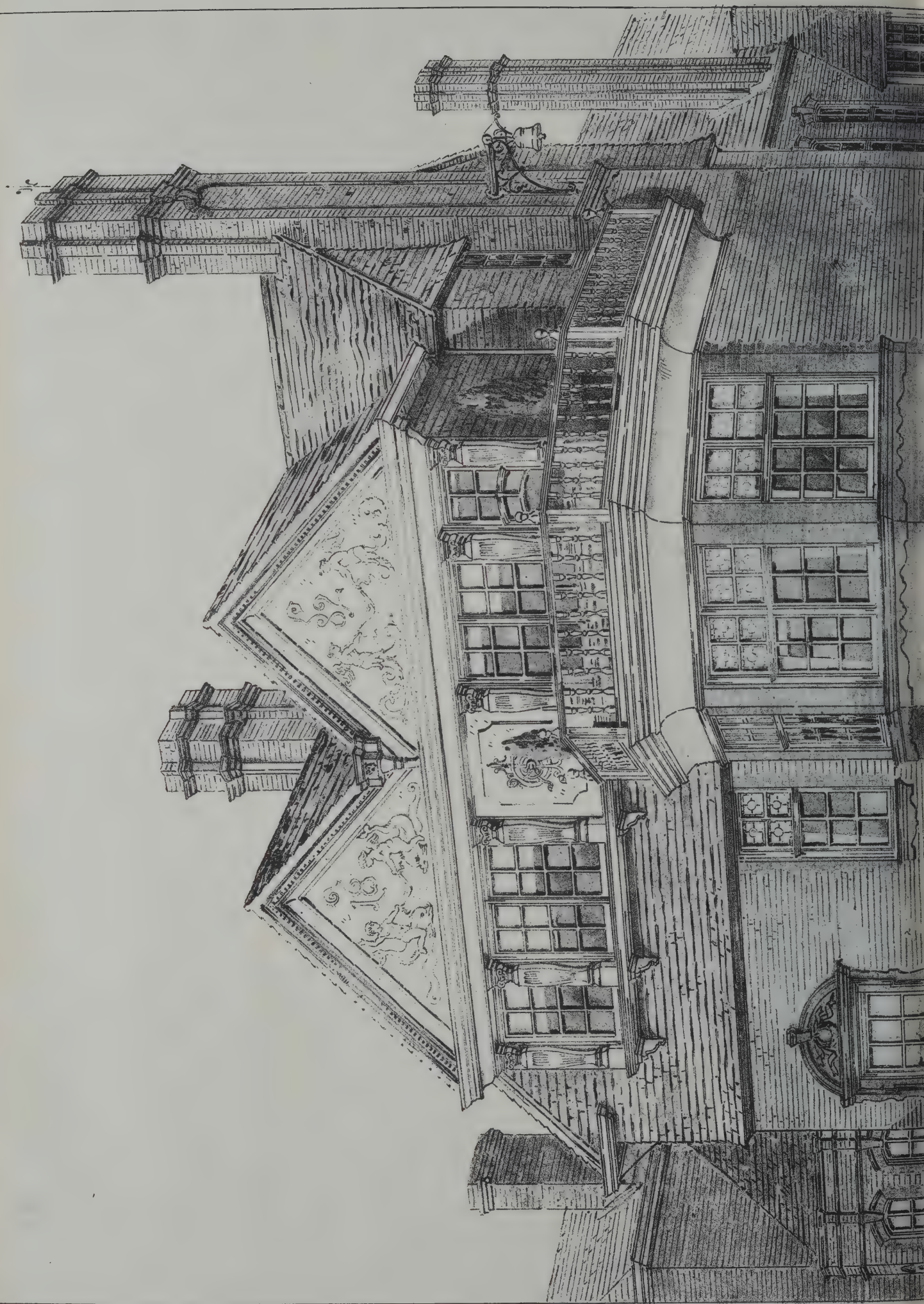


DESIGN FOR ALMSHOUSES.  
CHAS. E. POWELL, ARCHT.













HOUSE FOR J. THORNYCROFT ESQ. C. E. CHISWICK MALL.

MESSRS JOHN & JOHN BELCHER, F.R.I.B.A. ARCHTS









Sprague & Co. 22, Mark Lane, Cannon St. E.C.

BOAT HOUSE, WALLINGFORD-ON-THAMES.  
FOR C. D. LESLIE, ESQ. R.A.  
MESSRS CHRISTOPHER & WHITE, ARCHTS















## ILLUSTRATIONS.

HOUSE FOR MR. J. THORNYCROFT, C.E., CHISWICK MALL.

THIS house, now in course of erection, overlooks the Thames, and embraces a stretch of the river of two miles in length. The large bay window, and flat, have been therefore so placed as to take advantage of the extensive view. Externally, red bricks, gauged work, and tiles have been employed. A special feature of the interior will be the inner hall and staircase of oak. A novel method of warming will also be introduced, founded on the principle of the old hypocaustum.

Messrs ADAMSON & SON are the builders, and Messrs. JOHN & JOHN BELCHER, F.R.I.B.A., are the architects. The illustration is from Mr. JOHN BELCHER'S drawing exhibited in the Royal Academy this year.

BOAT-HOUSE, WALLINGFORD-ON-THAMES, BERKS.

THIS boathouse is being built for Mr. G. D. LESLIE, R.A., from the designs of Messrs. CHRISTOPHER & WHITE, architects, 16 Bloomsbury Square, W.C.

Leave was granted by the Thames Conservancy to project the building 4 feet beyond the line of the present banks, so that it stands well out into the water. It is solidly constructed of local red bricks; the upper portion of the walls are plastered, the exposed woodwork is of oak, and the roof is finished with Coalbrookdale plain tiles and lead. The contract, together with that for considerable alterations to the house, is being carried out by Mr. J. WELLER, builder, Wallingford.

DESIGN FOR ALMSHOUSES.

THE view of almshouses which forms one of our illustrations is reproduced from a coloured drawing which was in this year's exhibition of the Royal Academy. The buildings were designed by Mr. C. E. POWELL, of the firm of Messrs. MEDLAND & POWELL, with a view to their erection in one of the eastern counties, and comprise three sides of a quadrangle with a covered corridor towards the inner side.

A common hall, for the exclusive use of the inmates, is designed to be on the ground floor of that part of the building to the right of the principal entrance, with a hall above it for the purpose of entertainments, &c. At the opposite angle of the building is the residence of the caretaker, with a dispensary adjoining it.

No steps have as yet been taken with respect to the commencement of the work.

SHOPS AND BATHS, FONTHILL ROAD, FINSBURY PARK, N.

THE buildings shown in the illustration are to accommodate the district adjacent to Finsbury Park, in which the population is increasing more rapidly than in other parts of the metropolitan suburbs. There are five shops, ladies' swimming and private baths, and gentlemen's swimming and private baths; covering, in all, an area of over 10,200 superficial feet, of which the baths occupy about 6,440 feet.

The gentlemen's swimming-bath will be one of the largest in London, being 100 feet long, 35 feet wide, and 45 feet high from the floor of the bath to the soffit of the roof. The roof is carried by iron girders assisted by ornamental cast-iron spandrels, supported by twelve pilasters with moulded capitals, the moulding of which forms an impost running between the pilasters, and giving an ornamental effect, as it is in character with the panelled walls and ceiling between the girders. The bath is lighted from the top, which is arranged over the louvre ventilators running the whole length of the building. The gallery, fitted with ornamental railing, will be for dressing-boxes; or on gala days for visitors. There will be thirty-seven dressing-boxes on the platform. The floor and the sides of the bath will be lined with Minton's white glazed tiles. There are forty-four private (porcelain) baths, to be fitted with all the latest improvements.

The swimming and private baths will be heated by two Cornish boilers, which will give a temperature of 72° in the swimming-bath all the year round. The boiler-house, washing-rooms and drying-rooms, are in the basement, the height of which is 10 feet. The outside of the building, including the tower, is of red brick picked facings; and the stone used in the dressings is from the contractor's quarry, Prior Park.

The architect is Mr. JOSEPH JEFFREY BENNETT, of Broad Street, City; and the contractor is Mr. P. J. McMANUS, of Brook Green, Hammersmith, W.

## THE ACCIDENT AT ST. PATRICK'S CATHEDRAL, DUBLIN.

THE adjourned inquest on the people killed by the fall of one of the buttresses of St. Patrick's Cathedral, Dublin, was held on the 21st inst.

The Coroner said that in compliance with the request of the jury he had written to the Chief Secretary, or rather to the Private Secretary, asking that the authorities should place an independent architect at his disposal. He had not received a reply. Counsel for the contractor said they had asked Mr. Drew to examine the building, but if the jury did not wish he need not appear.

Mr. Carnegie, verger, said he was standing in the choir with the Dean when the buttress fell. Some of the stones of the flying arch fell on the groined arch of the roof. The mortar was like sawdust. The buttress was not one of those renovated by Sir B. L. Guinness. One of the stones was inscribed "Rebuilt by Henry Kingsmill, 1845." It was never suggested that the buttress was in a dangerous condition.

Mr. James F. Fuller, architect to the Cathedral Board, said he had been twenty-five years in the profession, and under the late Ecclesiastical Commissioners was entrusted with a large district, in which his duties were to superintend the erection and repairs of churches. The works at St. Patrick's Cathedral had been ordered by him. He was absent when the excavation at the fallen buttress was made, and had not seen the work for a week, but he did not think it would be fair to shirk the responsibility. He had confidence in the contractor. The underpinning was well done, the stones used were sufficiently large; but his instructions had not been followed, as mortar had been used instead of cement. He did not believe that any man could say positively what caused the fall of the buttress. There was water flowing, but it was intercepted from entering the excavation. If he had been informed that a crack was seen by the workmen, steps would have been taken to support the buttress, or, if time did not allow of that, he should have warned the people to keep away. He maintained that the buttress, which was cased-up in 1845, separated from the wall years ago—it might have been centuries ago. The masons employed in 1845 could have observed the separation. After the buttress had fallen a stone shoot to convey water from the roof was discovered. It was embedded in the heart of the wall, and after the separation the water percolated down between the buttress and the wall. A quantity of soot was found at the base, which satisfied him that the water brought it down from the roof. He could form no absolute opinion about the immediate cause of the catastrophe, but he believed that it arose from the defect in the construction of the buttress. If it had been properly built and bonded into the wall the underpinning would have been quite safe. If beforehand he had been asked by the contractor whether the buttress should be shored, he should have said decidedly not.

In cross-examination Mr. Fuller said that the contractor had been working on a schedule of prices, and it would have been more profitable to him if he had shored the buttress and used cement instead of mortar. If the buttress were properly built into the wall the base would be 4 feet by 5, and the foundation that was removed was about one-fourteenth of the area.

The Coroner said the inquest need not be proceeded with further if the jury thought they had evidence to enable them to decide whether there was criminal responsibility on the part of anyone connected with the works. They all desired to have independent evidence. The difficulty they were in with regard to Mr. Fuller was this, that while he had given his evidence frankly and fairly, he was to a certain extent trammelled by the fact that he did not like to throw the responsibility on the person acting under his instructions. He (the Coroner) had not the power of calling in another architect, but he did not think they could get any more evidence from any architect than that they had before them.

After a short adjournment the Coroner summed up. He said the duty of the jury was to ascertain, in the first place, whether there was negligence. Negligence was of three kinds. Criminal negligence was that in which life was lost by reason of the wilful and obstinate neglect of any person to do what he ought to do; culpable negligence was that in which serious blame attached to a party for not doing a certain thing, but which fell short of criminal responsibility; and there was a third degree of negligence, which arose from the doing of anything in such a slipshod manner that the party doing it deserved to be visited with censure. The contradicted evidence in this case showed that the work carried on at the base of the buttress unquestionably precipitated the accident. This accident was in preparation probably for centuries, and it might have been postponed indefinitely if some work had not been undertaken at the bottom of the structure, which accelerated its occurrence. As to the question of responsibility, the point arose whether the architect and builder ought to have foreseen the danger, and provided for it accordingly. In connection with that the jury were bound to consider the state of the buttress itself, and the fact that it had been separated from the wall. The blame for that, if any blame was to be attributed, rested upon the persons who cased the buttresses, and failed to discover, or, having discovered it, neglected to notice this deficit in the structure.



According to Mr. Fuller's evidence the persons working at the base recently could not have discovered the defect, because nothing in the roof or in the pillar itself would have indicated it. Therefore to his mind they could hardly fix the responsibility on any one person. If they came to the conclusion that it was an accident, and was unpreventable, because the danger could not be foreseen—and he thought they might fairly come to that conclusion—then the evidence was not strong enough to fix the responsibility on any individual. He thought it was a case of all others in which the jury might fairly ask the parties interested to do something for the representatives of the poor people who lost their lives.

The jury retired, and after a half-an-hour's absence the foreman announced that twelve were for holding Mr. Fuller and Mr. Pile responsible. The remaining juror was for holding Mr. Fuller alone responsible.

The Coroner: But you are agreed that it was an accident?

The Foreman: Yes.

The jury again retired, and after a short absence the foreman announced that they unanimous in finding the following verdict: "We find that Sarah Egan, John Ward, and James Bolger were crushed to death at Patrick's Close on September 14, 1882, by the accidental fall of one of the stone buttresses of St. Patrick's Cathedral, and we consider that the accident was due to the culpable negligence of Mr. Pile, the builder, and Mr. Fuller, the architect, then engaged in works at the said Cathedral."

### THE OBJECT AND SCOPE OF AN ART PROFESSORSHIP.

ON Tuesday (the last day of meeting in the department) a paper was read at the Social Science Congress by Mr. P. H. Rathbone on "The Object and Scope of an Art Professorship." He said:—The first question that arises is, What ought to be the distinct object of such a professorship? Should it be that of training up the artists that are to produce, or should it be the direction and stimulation of an enlightened public appreciation of art as the necessary condition of the production of art? To the existence of a great school of art an enlightened, healthy, and liberal public demand for such art is a necessary preliminary condition, and to create and direct such a demand seems to be the proper function of a professor of the fine arts. Incidentally he may be of use to professed artists, but these have to learn their profession by hard and serious study and practice under practical masters of their several arts. What I want particularly to prove is that the public appreciation of sound art is a first essential to the production of it. Once created, the demand will cause the supply of such art, and for want of a stimulant of this kind opportunities have been lost, for which posterity will bitterly reproach the blindness of the present age. The wealthier part of the public have not been educated in the relations of sculpture to architecture, and herein is one of the explanations of failure of our public monuments. I believe that this is a truth that only requires to be enforced upon the public mind to be acknowledged, appreciated, and acted upon. I believe there are opportunities slipping through our fingers now, and that we may yet be in time to save some part at least of the genius of artists still living amongst us. To mural painting the same moral applies still more forcibly. What should we have known of the genius of Michael Angelo as a painter if we had only his easel pictures to judge by? Another point as to which a professor of the fine arts may be of great use is in directing the public taste as regards art in daily life, as it has been termed; that is to say, as applied to articles in daily use—furniture, china, textile fabrics, &c.—and this is of serious consequence to us economically as a nation. We must look forward to losing our advantages over other nations in cheapness of coal and labour, and shall have to depend more every year upon the goodness of our work; and though it is upon the schools of art and design that we must depend chiefly for the supply of art for domestic purposes, yet the professor may greatly aid in creating a healthy public demand. These, then, are some of the objects of a chair of the fine arts; and the next question is, by what method are these objects to be attained? Here we must distinguish between art and archaeology. I find many people imagine they are studying art when they are only learning facts about art. With few exceptions, lectures on art ought to be illustrated either by examples shown at the time or allusion to those familiar to the audience. The subjects upon which the professor should lecture should embrace all the various branches of the fine arts; but his efforts should be addressed to the question of what is good art, and why it is so, rather than to the technical methods by which it is produced. Another subject to which an art professor ought seriously to direct public attention is the relation of sculpture and painting to architecture. At present they are treated as subjects entirely apart, and sculpture especially suffers in consequence. The finest sculpture of most ages has been created with a view to occupying a definite place in some building, and with a distinct loss to its effectiveness when removed from there. Very important also is it that the relation and importance of painting to architecture should be fully insisted upon. For want of a due appre-

ciation of this question, invaluable spaces of wall in our public buildings are left cold and bare which might be instinct with beauty and life, and money now expended in costly and rare raw material might be rather directed to remunerating the skill and intellect which makes a thing of living beauty out of the commonest raw material. But in order to achieve this end, its feasibility and desirability have to be impressed upon the governments and municipalities, and upon those who elect them. Town councils will be quite ready to spend money in these directions as soon as they feel their constituents believe in it. As soon as this is the case, as soon as we have a healthy demand for mural paintings, we shall not want artists to carry out our views. I will not go into the courses which naturally occur, such as the history of art, &c. The only fear is that these may occupy too exclusive attention. I lay much importance upon the lecturer's studying and explaining the relative cost of various media of art, as it is an element which enters into the question of demand. For example, the future of the English school of sculpture may greatly depend upon the free use of terra-cotta ornaments. In marble the cost of material and manual labour is so large an element that it is like to trench severely upon the margin left for skill and genius. Above all, the professor ought to bring home to all the essential beauty of the lines of the perfect human form, and as subsidiary, but also of first importance, the lines of drapery, and of the method of so disposing as to emphasise the beauties, and to indicate the lines of that form. Rash as may be the assertion, I think he might do great good in lecturing on dress. A drawing-room ought not to be a place where every woman has done her best to throw herself out of drawing, as must be the case while the atrocity of high heels prevails, which throw the body out of balance, deprive the step of that springiness which Virgil describes as the distinguishing charm of the goddess Venus, and the whole body of its liteness and elasticity, which is the essence of living grace; or while ladies indulge in that still worse abomination of tight lacing, ruinous to health, and almost more ruinous to beauty of line. I know that this abuse of dress is not nearly so prevalent as it was a generation ago, but it still prevails to a lamentable extent. Any lecturer could explain how drapery should be arranged on the living form so as to indicate the most beautiful lines of the individual form, and to slur over those which are less perfect. Another function of an efficient professor of the fine arts would be his value as an adviser to those who have the control over the galleries and museums of art which are becoming a necessity of all large towns. The great danger to these museums is the admission of faulty, or, still worse, mediocre examples of art, which may do more mischief than good. Also, if he be a man of real enthusiasm, he may be of great value in assisting the rise and evolution of artistic manufactures, and in the encouraging and organising of amateur societies for modelling in clay or wax, and the careful study of special forms of art, and in many other ways keeping alive an active love of and interest in art. It is evident, therefore, that an efficient professor of the fine arts should be a man of wide culture and varied experience. A knowledge of ancient and modern art, with some knowledge of technique and a practical power of drawing and modelling sufficient to exemplify his lectures, is of course necessary; and, above all, a broad and catholic taste, and a living, active sympathy with that human nature which is the foundation and essential of all great art, and without which it becomes an agent of corruption and death.

The Rev. J. F. McCallan said that Mr. Rathbone's paper dealt with a subject of peculiar interest to a town like Nottingham, having one of the first schools of art and one of the first art galleries in the kingdom. Indeed, it seemed to him that the ideas of the essayist were already to some extent being realised in Nottingham. To such a town, whose manufactures depended so much on artistic skill, a professor who could not only descant on the lines of beauty but draw them was of the greatest importance. He trusted that one day, by the aid of persons of wealth, benevolence, and taste, Nottingham would be placed in actual possession of a complete museum of beautiful things—not merely loans—by the contemplation of which the youth of the town might be inculcated with artistic tastes.

The Rev. W. Vincent Jackson, while admitting the advantage of having a lecturer who would go round with his audience to inspect various works in museums, said he thought that many people did not realise the value of the Castle collection. He suggested that labels, pointing out the excellences or even failings of works of art should be attached. This would reach persons who might be unable to attend lectures.

Mr. G. W. Taylor insisted on the importance of more artistic dress. He welcomed the idea of an itinerant professor.

Signor Tito Pagliardini urged the necessity of inculcating children with a love of art from the very first. He pointed out that the artistic education of an Italian child began with its senses—it saw good sculpture and fine architecture, and heard good music. Thus the least spark of artistic intelligence in a child's mind was speedily fanned into a flame. Since his arrival in England, thirty years ago, he had remarked a great improvement in the artistic taste of the people, which he attributed largely to the International Exhibition. Begin a child's artistic education at the plastic age, he again urged. It would do more than profes-



sional lectures to limited audiences. And in this connection he pleaded for light and airy schoolrooms, embellished with good engravings, or even with chromo-lithographs.

Mr. W. H. Freeland did not think there would be any difference of opinion as to the value of such an art professorship as had been described. He hoped that a subject to which Mr. Rathbone had had the courage, with delicacy and taste, to refer would commend itself to the sex which was so largely represented at the meeting, and that ladies would endeavour to dress with regard for beauty of form as well as of feature. He remembered a time when the Chinese ladies were much ridiculed for distorting their feet. He was sorry to see English ladies imitating that cruel and barbarous, he might even say wicked, fashion.

Mr. Joseph Brown, Q.C., fully admitted the justice of Mr. Rathbone's contention, that public appreciation of sound art was a first essential to the production of it. The wealthier classes were more artistic, because their wealth enabled them to surround themselves with works of art. The masses would never get this until the museums and art galleries were open on the one day on which they were able to visit them. He did not see how the poorer classes were to become acquainted with works of art by any other method. Their only other opportunity for seeing works of art was in shop windows; and he must say he was extremely interested when he saw a number of working-men and boys crowding round an art dealer's shop in the Strand.

Mr. T. C. Hine said that in the Nottingham Art Museum they had a collection of the most important treasures in the country, which was pronounced indeed the best out of London. But the public could gain little from these works of art beyond what was simply recorded on a card underneath. He suggested that a card should be affixed to each work of art giving the painter's name, birth, and any interesting incidents that marked his life. He was quite sure that any institution without this failed in accomplishing the object for which they professed to be established. As he was intimately connected with the initiation of the museum he would ask the chairman to put this resolution before the meeting, directing that the committee of the Nottingham Museum should be requested to place on each picture a printed card recording information which was deemed desirable that every man should have in this matter.

Mr. Aitchison thought it quite possible to get art professors to come down and give a few lectures. An art professor was almost an unknown bird. He was required to contain within himself such an immense variety of gifts that he must be a man of considerable education and extensive knowledge. He would be required to have the knowledge of a professor of each particular art. He would certainly have devoted himself to some particular branch of art to which he would give preference. Mr. Aitchison then proceeded to pass a eulogy on the President of the Royal Academy, as one in whom would meet the gifts requisite for such a post. More important than an art professorship was the infusing a love of art into the people for its own sake. You must have a love for the thing, else you will not find any art that is worth anything. People were stimulated by seeing anything done better by other people, and they excited an emotion which they themselves felt. Regarding what Mr. Tito Pagliardini said, who was not an Englishman, and who had left the room, Mr. Aitchison thought no doubt to some extent it was true. We must take the greatest trouble to get our children surrounded by things of beauty, and see that they had nothing that would cause ugly or unfavourable impressions. Although Italy was a more art-producing country than England from the middle of the thirteenth to the end of the seventeenth century, they had advantages which no other nations possessed—advantages of natural character. With the exception of music, however, there was now no comparison with that and other fine arts between Italy and England. Regarding certain peculiarities in the dress of ladies to which Mr. Rathbone had adverted in his paper, Mr. Aitchison thought the dress of men almost as hideous and almost as destructive to the human form. He suggested that if women shared in the exercises that were indulged in by men, this would result in giving way to a more natural form.

At the afternoon meeting a paper on "Oriental Art," by Mr. Pfoundes, was read in his absence.

**The Foundation-stone** of new works for the manufacture of Braby's corrugated iron and unsoldered patent zinc roofing was laid last week in Glasgow. The area of the works is over three acres.

**Manchester Cathedral.**—The restoration of Manchester Cathedral is progressing. With the exception of the carving of a few bosses, the first or most westerly bay in the north arcade of the nave is entirely finished from the floor to the roof, including the piers, the arch, and the clerestory. The second bay is also approaching completion. It is now possible to compare the graceful and slender stonework in its original dimensions as the first architect designed it with the more bulky cemented pillars. We understand that there are sufficient funds to warrant the restoration committee in proceeding rapidly with the whole of the north arcade from the western doorway to the great chancel arch.

## THE MANCHESTER SHIP CANAL.

REPORTS have been prepared by Mr. E. Leader Williams, C.E., and Mr. H. Hamilton Fulton, C.E., who were appointed by the Provisional Committee to make detailed surveys of the rivers Mersey and Irwell, and report as to the feasibility of constructing a navigation to Manchester available for ocean-going vessels. The Committee also retained the services of Mr. James Abernethy, F.R.S., as consulting engineer. Under the direction of Mr. Williams and Mr. Fulton, a complete survey of the navigation, with levels and borings, has been made, and reports, together with plans and estimates, have been prepared and submitted to Mr. Abernethy, who, after an inspection of the proposed course of the navigation, reported to the Committee upon the schemes thus submitted to him. The reports show that Mr. Williams and Mr. Fulton differ in opinion as to the mode of carrying out the object the Committee had in view—viz., of bringing ocean-going vessels up to Manchester. Mr. Williams proposes to improve the present tidal portion of the river from Garston to Latchford, to make it from that point to Irlam semi-tidal, and thence to Manchester to construct a ship canal; whilst Mr. Fulton's proposal is to make a tidal navigation the whole distance. Mr. Abernethy to the fullest extent approves of and endorses Mr. Williams' scheme; and after giving the matter their most careful consideration, the Committee have unanimously arrived at the conclusion that such scheme is perfectly feasible, and in every respect desirable. The Committee believe that the grounds upon which Mr. Abernethy has approved of Mr. Williams' scheme in preference to that of Mr. Fulton, and the reasons which have guided the Committee in their decision, will be apparent upon a perusal of the various reports. The Committee therefore strongly recommend that Mr. Williams' scheme, as approved by Mr. Abernethy, be adopted, and earnestly request the co-operation of the subscribers to enable the same to be carried out. It is felt that application should be made for Parliamentary sanction to the project in the approaching session, and the Committee desire to point out the steps which, in their opinion, should be taken to this end.

Mr. Williams in the course of his report says:—I propose to continue the tidal river from Garston to Latchford, above Warrington, and above that point to Manchester, a distance of 15 miles, construct a ship canal with locks to raise the water-level to nearly its present height at the proposed site of the docks at Manchester. At Latchford there will be a group of three locks of different sizes, placed side by side, close to and parallel with each other. Intermediate gates will be provided to each lock, so as to allow of the large locks being used for shorter vessels, or barges, without waste of water. Through a similar group of locks on the Amsterdam Ship Canal nearly 700 vessels of different sizes have been passed in one day, so that detention need not be feared, as the largest locks will hold several vessels at once, or a tug and large train of barges. The gates and sluices will be worked by means of hydraulic power, for which purpose the fall at the locks will be utilised, and vessels will be able to pass quickly through the locks. Except at low tides the gates of this set of locks will be all open about high water, as the tide will rise to above the level of the upper pound. At such times vessels will pass through the locks or through special large tidal gates without any detention. The large flood sluices (which are provided at each set of locks) will also be opened, and thus through the tide gates, the three locks, and the sluices a free flow of the tide will pass up to the first pound (which will be thus partly tidal) to the next group of locks near Irlam, a distance of about eight miles. As soon as the tide turns on the ebb, the gates and sluices will be closed, and the level of high tide maintained in that long reach of river. The locks at Irlam will be above the railway bridges of the Cheshire lines, which will therefore have no higher water level under them than high tides. These locks will be the same in every respect as those described at Latchford, except that the tidal gates will not be required, as the second pound (four miles long) will be above the level of tidal influence. The Irlam locks and sluices will pen back the water to a short distance above Barton Aqueduct, where the third and last set of locks, similar to those at Irlam, will be constructed. The Barton locks will maintain the ordinary level of the river to a height 8 feet less than at present below Throstle Nest Bridge, a distance of three miles, and give a level for the water in the proposed docks which will enable trade to be carried on with facility and dispatch. Steam power will be provided at each lock to work the hydraulic apparatus in dry weather, when the whole of the flow of the river might be required for lockage. If necessary this power could be utilised at such times to pump water back to the pound above by means of large centrifugal pumps. In ordinary seasons the river will afford an ample supply for the Irlam and Barton locks; but I propose to excavate the channel through those pounds 4 feet lower than will be required for purposes of navigation, so that the surplus depth may act as large reservoirs in exceptionally dry weather. The Irlam pound will also have the advantage of the supply from the Mersey, which will be taken when required by a conduit through which the river will flow into the canal above the Irlam locks. The locks will be connected with each other by culverts and sluices, which will allow of a great part of the water in a lock being passed into the adjoining locks,



and utilised again for lockage. The Welland Ship Canal in Canada, which has cost a much greater sum than is proposed to be expended on the Manchester Ship Canal, has no less than twenty-seven locks, with a total rise of 330 feet. The rise by lockage above ordinary spring tides at Irlam will be 35 feet by two locks. There are few docks that are not entered by a lock, and as a vessel going up on high tides to Manchester will pass the Latchford locks when the gates are all open, it will only have to pass one lock more than usual at many seaports. The width of the canal between Manchester and Warrington will be 100 feet at the bottom. The Suez Canal is 72 feet wide, and the Amsterdam Canal 87 feet wide at bottom. In the case of the Suez Canal, however, large steamers can only pass at certain places, where the canal has been widened for the purpose, and I consider it essential that the Manchester Ship Canal should be of sufficient width to enable large vessels to pass at any point. From Warrington the canal will gradually increase in width, until it is 300 feet wide at the bottom as it approaches Runcorn; through the tidal portion of the canal the depth will be dredged to 22 feet at low water; on the upper part of the canal it will be 26 feet deep at ordinary water level.

The following is the report of Mr. Abernethy:—Since the period of my inspection of the rivers I have given the subject my most careful consideration, and from long experience in the design and construction of similar works, aided by the valuable information furnished by Mr. Williams, I have arrived at the conclusion that the general arrangement to be observed in the design of the proposed improved navigation is to prolong the tidal portion from Liverpool upwards, so far as to enable vessels of a large class to navigate safely to a certain point during a flood tide, passing thence into a canal independent of tidal influence—in other words, to canalise the upper portion of the river to Manchester—by the construction of three sets of locks, forming three pools of the respective lengths of eight, four, and three miles, which can be navigated rapidly and with perfect safety, as by the modern system of working locks by hydraulic power the loss of time in passing them is inappreciable. I approve, therefore, of the salient features of Mr. Williams' design—*i.e.* the straightening, widening, and deepening of the river beds from Manchester to Latchford, 15 miles, and the gradual widening, straightening, and deepening of the tidal portion of the River Mersey seaward towards Liverpool. In the canal portion ample provision is to be made by weirs and sluices for the passage of flood waters and the scouring out of the deposit brought down to them, and it is obvious that the rectification of the present tortuous course of the rivers and increased sectional area of channel will minimise the effect of floods; while the rectification of the tidal portion in the manner proposed will tend to improve the lower portion of the navigation at Liverpool, and seaward to the bar. I approve of the proposed dimensions of the canalised portion of the navigation—*i.e.* a bottom width of 100 feet, with a depth of 26 feet at the ordinary level. These dimensions are greater than those carried out in the cases of the Suez or Amsterdam Canals, and are capable of accommodating and allowing the free passage of vessels of large tonnage. A less depth at low water will suffice in the tidal portion, having regard to the rise of the tide, but I recommend that it should be increased from 22 feet, as proposed by Mr. Williams in his report, to 24 feet. In connection with the tidal channel at Warrington, Mr. Williams proposes the construction of a lock, forming the present bed of the river into a float; but, having regard to the commercial importance of the town, I further recommend the formation of a dock of 12 acres area, by widening out on the right bank of the present river, immediately below the crossing of the London and North-Western Railway, and the construction of quay walls. I approve also of Mr. Williams' suggestion for the formation of docks at Irlam and Barton. The canalisation of the river, as proposed, raises the surface of the water in the proposed dock at Manchester so as to admit of the quays being at a convenient level for communicating with the various railways and streets of the town, an advantage of great importance for the interchange of traffic. The proposed dock at Manchester is of great area, but it may be proportionally executed, from time to time, as the requirements of traffic may demand. Mr. Williams deals generally with the important question of the crossing of the various railway bridges, and points out that the lowering of the low-water level at Runcorn will give a clear headway of 75 feet at high springs, or 90 feet at ordinary tides, amply sufficient for the free passage of the largest class of steamers, or sailing vessels with their topmast struck; the number of the latter are fast decreasing. He refers to the fact that by the various Acts of Parliament the railway companies are required to provide swing bridges on the improvement of the navigation for sea-going vessels. I have considered this question, and have no doubt that arrangements can be made to execute the required works, and thereafter carry on the free navigation of the canal, without impeding, even temporarily, the railway traffic, or that of the Bridgewater Canal. I have confined my observations to the general features of the scheme proposed in Mr. Williams' report, and shown on the relative plans and sections, without reference to matters of detail, requiring more mature consideration. The bearings transmitted by Mr. Williams generally indicate that the foundations for the various locks, sluices, and

walls will be of a favourable character, and that the construction of the works is attended with no peculiar engineering difficulties, and if energetically prosecuted may be executed within a period of four years. Without detailed designs of the various works their exact cost cannot be arrived at, but from long and varied experience in the design and construction of similar works I am of opinion that the sum of 5,400,000*l.* may be considered as a sufficient estimate for the tidal channel canal and dock works at Manchester.

Mr. Fulton proposes a practically straight and newly-excavated channel, with passing places at intervals of three or four miles. His estimate of the expense of the excavation of the new tidal channel, basin walls, training works, including bridges, paving slopes, culverts, drains, diversion of brooks and watercourses, new roads, and compensation for lands and buildings, is 5,072,921*l.*

A meeting of the promoters was held in Manchester on Tuesday, when it was resolved that steps should be forthwith taken by the Provisional Committee to raise the necessary guarantee fund, and to apply for Parliamentary powers to carry out the scheme as proposed by Mr. Williams, and that as soon as an adequate fund had been raised a further meeting should be convened to appoint a permanent committee to prosecute the undertaking.

## TECHNICAL EDUCATION.

A SPECIAL question assigned for discussion in the Education Department at the Social Science Congress at Nottingham was, "How can technical training be best associated with (a) primary schools, (b) intermediate schools, and (c) local colleges?"

Professor Silvanus P. Thompson, in his paper, said that scientific training of a simple practical kind should begin in the primary school, where also the teaching should be accompanied by constant reference to the industries carried on in the district. But something more than this must be done, and he looked to an extension of the practical exercises used in Kindergarten schools as furnishing a valuable means of promoting this kind of training. The manual primary schools of France had shown how such a course of training was possible, the manual exercises therein given consisting chiefly of models in wood, iron, and clay of pieces of constructive work, embodying scientific principles, and executed from working drawings prepared by the scholar himself. In England neither the school nor the workshop afforded a boy the chance of a technical training, and he became an inferior workman, and the productive capacity of the nation suffered exactly in proportion as the productive power of the workman as an industrial unit fell below what it might be. In seeking to develop a system of technical education for themselves, it was not enough to educate foremen and masters in technical colleges and schools, because, owing to the want of apprenticeship, that training did not filter directly downwards to the rising generation of workmen. He was of opinion that to meet that necessity something should be done in direct connection with primary schools. A system of manual exercises in making constructive models in wood, iron, clay, wire-work, &c., was possible, and might be regarded as an extension of the Kindergarten system to more advanced and really useful work. Every child ought also to be taught to make working drawings, with plan and elevation, and to understand the principles of the method, for in all the constructive industries that was the way in which instructions were given. The time wasted on showy productions of bad art might well be given to useful industrial drawing, of which many workmen were woefully ignorant. Those subjects, he maintained, should be recognised among the subjects of the educational code, and adopted as part of the teaching of primary schools.

Alderman Cropper read a paper in which he gave the following description of a local college:—Animated by that spirit of enthusiasm without which no such college can succeed, some of the engineering firms of this town have contributed the material, and their employes are contributing the labour, for the manufacture of such necessities as a steam engine, lathes, and other tools; and it will add no little to the success of our enterprise for a working man, as he passes through the building and points to the various machines, to be able to say, "I gave a day's work to the making of that." One very important part of the apparatus will be a museum of models, showing in chronological order the various inventions in the departments to which especial attention will be directed. In many cases a plain, inexpensive wood model, in section, will suffice. For want of such a museum many a man has spent weary years in perfecting an invention which had been completed and probably abandoned long before. The pupils should be selected from those who have either passed or are passing certain classes in the college. I think this is essential, because the workshops are intended simply to illustrate the subjects taught, and are not in any sense intended to perfect the pupils in mere handicraft. The apprenticeship system will do that. The teachers will naturally be the professors of the college, but a considerable augmentation of the staff will be necessary. It would be unreasonable to suppose that the professors will be able to enter into the technicalities of a trade of which they must be profoundly ignorant. For such branches as weaving and the manufacture of textile fabrics an



intimate practical acquaintance with these manufactures will be required, and I see no other plan than the engagement of the best men to be found in each department, such men to supply the art (practice) while the professors supply the science (instruction). The method of teaching should be theoretical—the mere teaching of principles on a scientific basis, whilst the tools or apparatus should be used only for the demonstration of the principles taught. The professors should confine themselves to the teaching, and leave the demonstration to others. The best amateur workman is a mere tyro compared with an apprentice, and it is impossible that in the actual use of tools a professor can ever be more than an amateur. So long as the professors talk our apprentices will believe in them, but when they work our apprentices will “find them out.” If we do but confine ourselves to the useful application of scientific principles to our manufactures, technical education will be a blessing to the country. My chief fear is that professors, committees, and managers will be attracted by the “pretty side” to the neglect of the “seamy side,” which is, after all, that on which the real work is done.

The Rev. H. Solly, speaking as the representative of skilled artisans and employers, said that specific technical training should not be attempted at primary schools. But the Kindergarten mode of training supplied admirable hints as to what may be done at an early age in training all children to those habits of observation, manual quickness and dexterity in handling tools, copying patterns, &c., which are invaluable as a preparation for almost any subsequent occupation. And something might be done at primary schools to continue or commence this kind of training imparted at Kindergarten schools. By means of workshops, *e.g.* admission to which would generally be regarded as a privilege, lads might be instructed in the use of tools, in the rudiments of chemistry, in modelling, &c., especially on half-holidays, winter evenings, and so forth, whereby the ordinary school instruction would not be interfered with. Lastly, the elements of geometry should form part of the regular curriculum, if possible, in all cases; and drawing, both freehand and machine. By the time a lad enters an intermediate school it will generally be possible to determine the particular trade for which he is to be trained, if any. He will also be of an age for apprenticeship. At present very few apprentices or lads of any status receive specific, *i.e.* technical training for their trade in any workshop or factory. They have to pick up a knowledge of it as they best can, from chance hints, sharp observation, obliging journeymen, “standing treat,” running errands, &c. Hence apprenticeship schools or classes for technical training have become an absolute necessity. But in every case the main points in this connection were—1. That technical training must be given by scientific and practical workmen. 2. That to apprentices and all intended for specific trades it must be given outside of the actual workshop, and in addition to the manual dexterity and manipulative training they must get in the workshop. 3. That in these technical classes science and art teaching must be given them in connection with the actual materials and tools used in their trade.

Mr. T. Heller, Secretary to the National Union of Elementary Teachers, confessed to a sense of disappointment at hearing Professor Thompson giving so great a preponderance in his account of elementary technical education to mere manual dexterity rather than to intellectual instruction and culture. He deprecated any burdens being added to the already over-burdened teachers in elementary schools, and said that, representing, as he did, 14,000 elementary teachers, he would say on their behalf that any attempt to force the system of technical education on the elementary classes would fail in its purpose, and damage the general instruction which the teachers had to give. What they wanted in the elementary schools was to give such a sound general instruction as would enable a pupil to understand and assimilate the thoughts of others, and in that way to be able to educate himself.

The Rev. Capel Sewell, Inspector of Schools, concurred in what had been said by the last speaker. He thought it would be a good thing if the Congress would put its foot down on the project for connecting technical and primary schools, and put a stop to it; for if this were done it would save a great deal of trouble. If they were to have technical education they must make up their minds as to what they wanted, and take care to confine themselves strictly to that instruction. An elementary teacher was expected to teach everything nowadays, but it was not fair to add to the burden.

Mr. Charles Walker deprecated the proposal to abolish the old system of apprenticeship, which did much to keep a young fellow steady. He did not think that much good could come from local college technical instruction, but he thought it a good plan for young men to attend some evening school where he could be instructed in the rudiments of his trade. College professors were too apt to look at technical training as an abstract question merely, and not (as it ought to be regarded) a practical matter.

Professor Clowes quite agreed with what had been said as to leaving the task of teaching technical matters to soundly-trained workmen. He thought the system of scientific education ought to be supplemented by the examples of skilled workmen versed in the manipulative part of the work.

Professor Garnett recommended that the pupil on reaching a certain standard should be left to work out his own advance, the

limit of that advance being fixed by the teacher. He believed that if that were done greater progress would be made than under any other system.

The Rev. J. F. McCallan said, with regard to the connection between primary and technical education, he maintained that if arithmetic or mathematics were taught to a child, the foundations of technicology were being laid. One of the greatest obstacles to the advancement of working men was that they had no knowledge of mathematics, for with that knowledge they could do much better than without it. Technicology was the teaching of the scientific principles which underlie the art of the workmen; if they taught a child geometry or free-hand drawing, they were paving the way for that child in after-life being an accomplished workman.

## EXTENSION OF THE BRITISH MUSEUM.

ON Saturday morning the corner-stone of a block of buildings connected with the south-eastern side of the British Museum was laid by Mr. Edward A. Bond, Principal Librarian, in the presence of the chief officers of the Museum and others. Mr. Bond took advantage of the occasion to make known that the new buildings—consisting of a frontage to Montague Street of 120 feet, with two sides carried up to the Museum walls—were being erected from funds bequeathed by Mr. William White, a gentleman who had resided in the neighbourhood, and who at his death, in the year 1823, left the reversion of a sum of 63,941*l.* to the trustees of the British Museum, to be used at their discretion, but with the expression of a hope that it would be expended on an extension of the Museum buildings. The actual terms used by the testator are as follows:—

“The money and property so bequeathed to the British Museum I wish to be employed in building or improving upon the said institution; and that round the frieze of some part of such building, or, if this money is otherwise employed, then over or upon that which has so employed it, the words ‘Gulielmus White, Arm. Britanniae Dicavit 18—’ be carved, or words to that import. It is a little vanity of no harm, and may tempt others to follow my example, in thinking more of the nation and less of themselves.”

The bequest fell in early in the year 1879. By payment of the legacy duty—rigorously exacted by the Government—it was reduced to 57,572*l.* Of this sum about 11,000*l.* has been expended in the erection of a new gallery for Greek sculptures, between the Elgin and Assyrian Galleries, and in other works connected with it. The remainder is now being spent on the new block of buildings. It was further explained that this would give accommodation on the ground-floor for the rapidly-increasing collection of newspapers, which has outgrown the space designed for it in the library, together with a convenient reading-room in which they could be consulted, and, on the two upper floors of the front and north side, rooms for the department of prints and drawings, with ample space for exhibition. On the ground-floor of the south side the department of manuscripts would obtain extension, and the upper floor would give space for the exhibition of part of the archaeological collections.

The plans of the building have been prepared by Mr. John Taylor, surveyor to Her Majesty's Office of Works; and the contractors are Messrs. John Mowlem & Co. It is expected that it will be completed within about twelve months from the present time. It occupies the site of the garden attached to the official residence of the Principal Librarian.

## TRURO CATHEDRAL.

THE Truro Cathedral works are progressing rapidly. According to the *Western Morning News*, the structure now presents a very striking appearance, the part contracted for being about half-way towards completion. The present contract is for the choir and choir aisles. A fair idea of the extent of this part is now obtainable. The length of the chancel is about 150 feet and 29 feet wide between the walls. The width of the chancel aisles are 13½ feet each between the walls. There is a narrow aisle on the south side 6½ feet wide, which divides the Cathedral proper from the old south aisle of St. Mary's Church, which is being restored, and the old work, as far as admissible, re-used. Among the pieces of old work preserved are a niche surmounted by the Tudor arms (the architectural style of this old part being late Tudor), the priest's door, and some of the finely-carved moulding. A careful cast has been taken of all the pieces which were too decayed to be utilised, and those stones which replace them will be carefully carved, as nearly as possible after the original designs. The height of the chancel, from the nave floor-line to the point of the groin ceiling, is about 70 feet. Below the nave is the crypt, which is about 12 feet high, and will be used for vestries. From the groin ceiling to the roof will be about 25 feet, giving a total height of about 110 feet. The highest part of the Cathedral will be the main tower, which will be about 220 feet from the nave floor to the roof. This, however, is not included in the present contract. The entire building, when completed, will be over 300



feet in length from end to end. The north and south arcades are in a fair way towards completion, the choir arches being all set. The eastern wall is up as high as the window cap of the lower tier of windows, and the workmen are now engaged in setting the window arches. The north aisle walls are ready for the parapet, and in the south aisle the east window is set, and the others are in various stages of progress. The most conspicuous parts of the structure at present are the two great tower piers, of enormous girth and beautiful design. They are ready for turning the tower arches. As the building is now seen it is just half what its height will be, measuring from the crypt-floor to the vaulted ceiling. The size of the completed Cathedral may thus be faintly conceived. The south aisle will form the Lady Chapel, and the parish church daily services will be held there. The walls outside are faced with Mabe granite, and inside with St. Stephen's granite; all the other interior masonry is of Bath, Doulting, and Hamhill stone. The present contract, it is expected, will be completed in about two years, and divine service will then be held in the finished chancel, which will be blocked off from the remaining portions with a temporary wall. The completion of the entire building is simply a question of funds.

### WELBECK ABBEY.

A PARTY of members of the Social Science Association visited Welbeck on Saturday last. The following account of the place and of the excursion has been prepared by Mr. Hine, architect:—

It may be said briefly that the Welbeck and other magnificent estates in this county known as the "Dukeries" were inherited from Sir William Cavendish, who was knighted by Henry VIII., and married Elizabeth Hardwick, afterwards Countess of Shrewsbury. This notable lady had three other husbands, and being of a selfish and rapacious nature, and withal very shrewd, she managed to get their estates into her own hands, and from the daughter of a plain squire with a portion of 40 marks she rose to be the richest woman of her day, and by the great alliances which she secured for her children she became as it were the foundress of the noble families whose palatial mansions adorn the northern portion of this county. Her ruling passion was for building, in which she may have been influenced by the prediction of the witch, who is said to have told her, and perhaps safely enough, that as long as she continued building she would never die; but whether or no, it is quite true that after completing Chatsworth, Hardwick, and Worksop Manor, she commenced a large house at Owlcotes, when in 1607 a cruel frost put an end to all her building operations, and may possibly have been the cause of her death, for she was then at even a more advanced age than her grandson the duke when he commenced to build his town abode at Nottingham. Her husband, Sir William, is credited in biographical dictionaries and encyclopædias with being the Gentleman Usher of Cardinal Wolsey, also the author of the very interesting MS. narrative giving the life of the Cardinal, and first published in 1641. This, however, is ably disputed by Singer and Hunter, no mean authorities, who contended that it was George the poet, an elder brother, who was the man, and that the author was robbed of his literary honours for the aggrandisement of his more fortunate brother Sir William. She had issue, only by Sir William Cavendish, and was the grandmother of the first Cavendish, Duke of Newcastle, who, after being victorious in fifteen battles and sieges in the Civil War, and spending what would in the present day represent more than a million of money in the Royal cause, supplemented his Welbeck and other mansions by the erection of the modern Castle of Nottingham. He was the grandmother of Henry Cavendish, Earl of Ogle. This young nobleman was married to Elizabeth Percy, and had he lived to secure posterity, the Welbeck estates might have continued in the possession of the Newcastles, and be increased enormously by those of his wife's, who was heiress to Jocelmi, eleventh Earl of Northumberland. Some remarkable incidents are recorded in relation to this lady, who when a mere child had been married to the young nobleman before named. The latter died in 1680, soon after the family took up their abode in the new Castle of Nottingham, leaving his virgin wife a widow. Shortly afterwards, through the agency of her grandmother, the old Countess of Northumberland, she was contracted to Mr. Thomas Thynne, the princely lord of Longleat, on condition, however, that by reason of her extreme youth, a twelvemonth should elapse before the consummation of the marriage. In the meantime Count Konismark, a descendant of the noble family of Bradenburgh, having previously met the young lady, conceived the daring project of marrying her, and, as a preliminary step, coolly decided on the murder of Thynne. With this vile purpose in view, he engaged the services of three foreign adventurers, who on a winter's evening posted themselves at a spot where they had ascertained the equipage of Thynne would pass. This was near to the present Opera Arcade, in those days a dark and retired neighbourhood. As soon as the coach appeared the three men rode up to the window, and by their imposing attitude easily compelled the coachman to stop. Only one shot was fired, but so sure was the aim that the unfortunate victim expired shortly

afterwards. Konismark, by bribery and influence, managed to get acquitted; the other three were executed. On Thomas Thynne's tomb in Westminster Abbey the circumstances of this atrocious act are recorded in a bas-relief, which, as a work of art, has some claim for admiration. The Welbeck estates first came into the hands of the Bentinck family by the marriage of William Bentinck, the 2nd Duke of Portland, with Lady Margaret Cavendish Harley, granddaughter of John Halles, Duke of Newcastle, who met his death in 1711 by a fall from his horse while hunting. This nobleman entertained William III. at Welbeck in 1695, and the Nottinghamshire squires were invited to a grand meet on this occasion. There were no less than 400 gentlemen on horseback, who were charmed to hear the King say, "he hoped this was not the last run he should have with them over the vast domains of his host, and that he must hire a hunting-box amongst their delightful woods." Apart from the notable relics, it is to be regretted that so few of the old oaks should now be found standing within the woods round Welbeck, but the following letter, found in the archway of the Abbey, from Sir Christopher Wren will account for the disposal of many of them:—

"For Mr. Richard Neale, steward to his Grace the Duke of Newcastle at Welbeck.

"London: April 4, 1695.

"Sir,—Having in my letter of June 23, 1695, signified to you a particular of all the scantlings of the Timber wee might use in the rooffe of St. Paule, that his Grace's noble benefaction might be as useful as may be to the worke, and understanding that what is already designed is none of the great beams which is what wee are most solicitous for, and being given also to understand that wee must expect this season but Ten of his great Trees, I presume once more to acquaint you with the scantlings of the great Beames to prevent mistake." After furnishing these dimensions, he concludes: "I beseech you to present with all advantage our utmost sense of his Grace's favour, of which also I am very sensible as becomes,—Your humble servant,

"CER. WREN."

About the only distinguishable portion of the house erected by the first Duke of Newcastle is the riding-house built by him from plans by Smithson, who would doubtless be engaged in the erection of the riding-house at Bolsover. The Welbeck riding-house is 182 feet long by 40 feet wide, and has a fine curvilinear braced open roof, the oak timbers of which are unfortunately painted white. In this room were seen portraits of some of the horses which this duke is supposed to have bred. He contributed greatly to bringing our Flemish mares into something like hunting shape. He was said to be the first equestrian in Europe, and the MS. of his celebrated work on horsemanship is in the possession of the present Duke of Portland, but it happened to be in London on the occasion of the excursion.

The most notable attraction to the party, and one of intense interest, was the silver chalice from which Charles I. took the Communion on the day of his execution. As a special favour the conductor of the party was allowed to remove this from the glass case, or, to speak ecclesiologically, the ciborium in which it was enshrined, and carry it round for the inspection of the visitors. A tattered and discoloured document within the chalice certified to its authenticity. Among other objects of interest to which the visitors were conducted were the gardens, and the acres of glass conservatories: the walled-in portion of the gardens alone represented an area six times as large as Nottingham market-place. The attractions of the place generally were found to be so great that the majority of the party decided to deviate from the programme by staying for a later train. It is needless to say that the whole were highly gratified with the kind and hospitable reception they met with, and will doubtless retain a lasting recollection of the marvels of Welbeck.

**The Swinton Drainage Works.**—The members of the Swinton Local Board lately went over the Swinton Bridge Sewerage Works to inspect them on the completion of No. 1 contract by Mr. Wortley, of Doncaster. A substantial engine-house has been raised upon a high bank of dirt and ashes, and has been furnished, for about 6,000*l.*, with engines and machinery by Tangye, of Birmingham. The system is filtration by irrigation. Satisfaction was expressed with Mr. Wortley's work. The work under the contract for the sewerage has been begun by Mr. Norbran, of Rotherham. Contracts are also being sought for the waterworks, which are to cost about 10,000*l.* of the 24,000*l.* loan. The amount of Mr. Wortley's contract was 1,397*l.*, the machinery cost 600*l.*, and the amount of No. 2 contract just begun is 1,500*l.* The pumps were seen on the occasion to lift a thousand gallons a minute. A little subterranean forest has been discovered in the course of the digging, consisting chiefly of black oak trees, the trunks and branches being in good preservation. One monster, 23 feet below the engine-house, is 3 feet 6 inches in diameter. In one part were a number of filbert nuts. Several of the hard trunks have been dug out, and given away to the men for firewood. The soil appears to be a sandy warp, and probably was once part of the river.



**Christ Church, Zanzibar.**

SIR,—I beg to forward copy of a letter addressed to the *Times*, which has some bearing upon the practice and value of training in our profession. As such I ask you to insert it, as the *Times* has not noticed it. The article implied more boldness than wisdom in the Bishop in being his own architect, whereas he had the wisdom always to employ an architect (myself), though he had his ideas well defined, and so was able to give clear instructions, and personally to carry out on the spot the designs which might otherwise have been useless.

I wish there were many more like Bishop Steere, as I claim him on the side of professional architects (even from the time when we as boys first studied together), and not, as the writer of the article in the *Times* would imply, as being ready to ignore them and depend upon himself alone.

I am, &c.,

C. FORSTER HAYWARD.

20 Montague Street, Russell Square :

September 25, 1882.

(To the Editor of the *Times*.)

September 20, 1882.

As one who knew the late Bishop Steere intimately from the time we were schoolfellows together, and as one deeply interested in the new building called the Cathedral at Zanzibar (the late Bishop always called it "Christ Church"), having made all the designs for it myself, I feel impelled to add a few words to your excellent statement of his life and work in your issue of the 19th inst. The Bishop is there spoken of as a bold man, because he was his own architect, and, it is added, that he felt himself equal to the task. I think I alone can fully appreciate this, inasmuch as the Bishop came to me as to an old friend with his original ideas, and bringing his crude sketches with him, asked me to undertake the task of designing the building therefrom, putting the whole into a proper architectural form. This was done, and therefore the boldness referred to was less than the wisdom which sought and accepted help in the form which was needed.

Subsequently the Bishop himself superintended the whole of the work on the spot (put together under his own eye)—the centering for the vaulted roof, which I had caused to be made and sent from England, as well as set up the marble work for columns, &c., stained glass for windows, font, and altarpiece of marble and mosaic.

These sketches I have referred to were no surprise to me, as we had gone together in small church-hunting expeditions many years ago, he studying the glass and such internal details while waiting for the conclusion of my architectural study of a building, neither of us dreaming how in after-life such studies would blend together in forming a distant edifice—a church in the slave market at Zanzibar—and scarcely less so when, on his first appointment to the living of Little Steeping, he called on me to build his parsonage, and subsequently the schools, after his first visit to Zanzibar.

**ARCHÆOLOGY.**

**Preservation of Ancient Monuments.**—At the excursion of the members of the Penzance Natural History and Antiquarian Society, a few days ago, Mr. Borlase, M.P., said he would take that opportunity of saying something about the letter which appeared in the *Times* the other day from his friend, and the friend of many of them, Canon Venables, calling the attention of antiquaries of the west country to the fact that the Cornish pre-historic monuments were not inserted in Sir John Lubbock's Bill, the reason assigned being that they were in Duchy property. He (Mr. Borlase) did not for one moment believe that if a proper application were made to the Duchy to have these monuments, which might be upon its ground, included in the Bill, there would be the least difficulty about the matter. The reason why they were not inserted in the Bill was because there had really not been time to do so. It was thought it would be better to get the Bill through in its present form, with a schedule containing a certain number of the most important monuments in England worth preserving. He was glad to say that the societies of Cornwall, and the people of the county generally, were found to be anxious to preserve these monuments, and more especially in later years. He would again say there would be no difficulty whatever in adding the ancient monuments of Cornwall to the schedule of the Bill by a resolution which might afterwards be moved upon the subject, and he would be extremely glad to do all he could in the matter. The Bill of Sir John Lubbock he thought everyone would acknowledge was a most valuable one, and he hoped it would not only tend to the preservation of pre-historic monuments, but stimulate an interest in them. Mr. Borlase also stated that plans of the rude stone monuments of Cornwall, most carefully prepared by Mr. Lucas, were at present

in the hands of the Society of Antiquarians, who were about to print them at their own expense. Seeing the pains and the cost which the Society had gone to, he hoped a large number of copies would be sold in Cornwall.

**ENGINEERING WORKS.**

**The Metropolitan Railway.**—A section of the extension of the line between Aldgate and Trinity Square was opened on Monday morning. The High Street, Aldgate, is carried over the line by a bridge with a span of 82 feet, constructed of heavy wrought-iron girders, with iron plates to bear the great gas-mains of the Gas-Light and Coke Company. The railway here is sufficiently wide to allow four lines of way and two platforms to be used. The tunnel further on is 25 feet wide, with vertical side walls and a segmental arch, the side walls and retaining walls of the open cutting being made of Portland cement concrete, and thick and strong enough to bear any buildings that may be erected above them. The arch is of stock bricks laid in mortar, and in some places is 3 feet thick. In passing under the Blackwall Railway it was necessary to underpin the abutments of the arch, and much care had to be exercised in making this portion of the line, as the traffic from Fenchurch Street had to be carried on without interruption, and trains were continually passing and repassing on the archways of the railway beneath which the new line was being made. The temporary station at Tower Hill is a wooden building placed saddlewise above the line, with a single staircase for the platforms, which are 300 feet long by 12 feet wide, and, like the stairways, covered with an ornamental iron roof. After passing under the High Street, Aldgate, the line runs for seventy yards in an open cutting, then through the tunnel under the Minorities, through another piece of open way, next by a covered way beneath the Crescent, whence it emerges into the open-air station. The works have been constructed under the direction of Mr. Tomlinson, C.E., and Mr. Seaton, by Mr. T. A. Walker, contractor. In the tunnel under the Minorities the experiment has been tried of lighting the line with the incandescent electric lamps of the Swan United Electric Light Company, with a view to determining whether sufficient illumination could not be obtained in this way without lamps in the carriages.

**NEW BUILDINGS.**

**Maidstone.**—A new children's ward has been opened at the West Kent General Hospital. Accommodation is provided for from twelve to sixteen beds. The building is a plain substantial structure of red brick on an elevated site in rear of hospital, and connected by a corridor 70 feet long. Day-room, bathroom, nurses' room, kitchen, storeroom, lavatories, &c., are comprised. The architect is Mr. E. W. Stephens, of Maidstone, and Mr. Avaré is the builder.

**Public Baths, Glasgow.**—The new public baths in Kelvin Street, North Woodside Road, were opened on the 13th inst. The building has been erected from designs by Mr. Carrick, master of works. A flight of steps lead up to the main bathroom, in which there is a large swimming-pond, measuring 75 feet in length and 40 feet in breadth, with a maximum depth of 6 feet 6 inches, and a minimum of 4 feet. It is lined with white enamelled tiles, and there are the usual gymnastic appliances, which hang from the open timber-work roof. Along either side of the hall are twenty-four dressing-boxes, with entrances from a separate passage as well as from the bathroom. A gallery capable of accommodating about 300 spectators runs round three sides of the apartment. In another portion of the building is a ladies' swimming-pond, which measures 40 feet long by 23 feet broad. There are twenty-seven private bathrooms for gentlemen and seven for ladies. The washing-house has sixty-seven tubs, and is in the basement of the building. It contains a full equipment of boilers, wringing-machines, and drying apparatus. The total cost of the building has been about 19,000*l.*, including site.

**Lancaster.**—On Wednesday the new hospital which has been erected in the grounds of the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, which is the gift of Mr. Edward Rodgett, of Darwen Bank, Preston, was formally opened by the Earl of Lathom. The new building is detached from the main building of the asylum, and is intended for the reception of infectious cases of disease among the inmates. Mr. James Hatch, of Lancaster, is the builder. The hospital, which is placed on a sunny site, south of the asylum, is a plain substantial structure built of local freestone, and roofed with green Westmoreland slates. The building faces due south, and consists of a central block two storeys in height, and east and westward wings one storey high, with washhouse and other offices detached, and enclosed by a yard wall. Altogether accommodation is provided for thirty-three patients, and both floors can, in case of an extensive epidemic, be used in conjunction by opening a door of communication. All the rooms are airy, well-lighted, heated, and ventilated. The heating and ventilation are effected by Manchester warm-air grates, with



open fires, supplemented by a hot-water apparatus placed beneath the floors in chambers and conduits, from whence fresh air, warmed or otherwise, can be admitted into the wards or rooms, either at the floor level or through upright shafts seven feet high (at will), whilst a constant change of air is effected by means of vertical extracting shafts connected with gratings in the ceilings of the wards. All windows open in three heights, so as to admit air at any required level. The hospital is surrounded by its own separate grounds, which will be laid out with shrubberies, walks, grass slopes, &c. The contractor for the hot-water apparatus, combined with ventilation, was Mr. A. Seward, of Lancaster. The sub-contractors for Mr. Hatch were—slating and plastering, Mr. Cross; plumbing, Messrs. Calvert & Heald; and painting, Mr. H. Warbrick, of Lancaster. The furniture has been supplied by Messrs. Gillow & Co., of Lancaster and London.

**Paisley Library and Museum.**—This institution has been enlarged at the expense of the original founder, Sir Peter Coats. The ground rises rapidly towards the back, and the new building has been planned to rise with it to avoid the expense of deep excavation, as well as the disadvantages of sunk building. The result is that the floors of the new portion of the museum and reference library are on the same level as the gallery of the old museum. The access to the new portion, which now contains the largest and most handsome of the apartments in the combined structure, is by two spacious flights of steps directly opposite the principal entrance. These lead to a circular-shaped central hall 30 feet in diameter, laid with marble mosaic flooring of elegant design. The hall is roofed with a coffered dome, supported on Corinthian pillars. Entrance is afforded by this hall to the new portion of the museum, fine art galleries, and new reference library. The library, 50 feet long by 24 feet wide, is surrounded by bookcases, with which the timber mantelpieces of two fire-places are designed to harmonise. In a panel over the northern fireplace there has been introduced a piece of sculpture in bronze executed and presented by Sir Noel Paton, R.S.A., whose early years were spent in Paisley as a designer. The art galleries consist of a sculpture gallery 30 feet square, and a picture gallery 80 feet long by 27 feet wide. A handsome panelled cove rising from the cornice gives an effect unbroken by cross-ties, the necessity for which has been avoided both in this gallery and in the museum by a free use of iron in the construction of the principals. A fine hall has also been provided to the extent of 90 feet long by 48 feet wide, divided by a row of Ionic columns, carrying with the walls two semicircular ceilings, the centre of which is largely composed of glass. Adjoining the reference library are lavatories and a large room for storing specifications of patents, while under part of the hall is a large, well-lighted work-room. The reference library is partially and all the other rooms are wholly heated by hot-water pipes. The entire work has been carried out according to the designs of Mr. John Honeyman, F.R.I.B.A., architect, Glasgow, who planned the original building. The contractors were:—Mason, Mr. John Tod, Glasgow; joiner, Mr. George Ferguson, Glasgow; slaters, Messrs. W. Gillespie & Son, Paisley; plumbers, Messrs. Wallace & Connell, Glasgow; plasterer, Mr. James Hutcheson, Paisley; tiles and mosaic, Messrs. Galbraith & Winton, Glasgow; heating, Messrs. James Boyd & Son, Paisley; painting, Messrs. D. Murray & Son, Paisley.

**New Hydropathic Establishment, Seaforth.**—On Monday the Earl of Lathom opened the new establishment of the International Marine Hydropathic Company, on the Lancashire shore of the estuary of the Mersey. Seaford House, Seaforth, a few miles north of Liverpool, on the Liverpool, Crosby, and Southport line of the Lancashire and Yorkshire Railway, was until lately the residence of a Liverpool merchant; but since its acquisition by the above company it has been greatly enlarged and altered to suit the purposes of a high-class hotel as well as those of a hydropathic establishment. The main building, constructed of Yorkshire stone, has a frontage to the sea of 659 feet, and on its flat roof, at an elevation of 80 feet from the ground, is constructed a very spacious and properly-guarded *ascianda*, where visitors may promenade in suitable weather. From this lofty position fine views are obtainable. This *ascianda*, which may be reached by either staircase or elevator, has an area of 150 feet by 40 feet; and on the southern section of the building there is another similarly lofty promenade. The house has accommodation for 200 visitors, while its culinary arrangements are sufficient to provide for about 500. There are reception, reading, and card rooms, general and ladies' drawing-rooms, large dining-hall, picture-gallery, billiard-room with five tables, besides other apartments; and on the main floor the rooms are so arranged that on the occasion of *conversazioni* they may be opened for promenade all round. For the baths provision is made for an abundant supply of sea-water brought into the reserve tank by a system of upward filtration, a large quantity being obtained at each flow of the tide. On the roof there is also an arrangement for securing a plentiful supply of clean rain-water, the tank having a capacity of 250,000 gallons. Attached to the house are glass-covered conservatories, vineries, and fruit-houses. The grounds on the sea side of the house are protected by a raised terrace and promenade; and between this terrace and the house is a lake 650 ft. long, filled to a depth of

5 feet or 6 feet with filtered sea-water, constantly pumped in at one end, while there is an outflow at the other. It is intended to utilise this in summer for bathing on the Continental principle—ladies and gentlemen being in the bath at one time. In winter the water may be lowered and the area used for skating purposes. The works have been carried out under the direction of Messrs. Weightman & Son.

### CHURCH BUILDING AND RESTORATION.

**Leith.**—Plans of Messrs. Sloan & Balderston, of the United States, arranged and adapted by Mr. Thomson, architect, of Leith, have been selected for the erection of a church in Lorne Street. The building will have a frontage to Lorne Street, and is in the form of an octagon. A circular arrangement of the seats is adopted in the ground plan of the interior, and in the gallery, which is of a horse-shoe formation, the seats will be similarly constructed. The area of the building will be 76 feet square, and, with a roof span of 80 feet, without intersecting beams. The estimated cost of the building, which will provide sitting accommodation for over 1,200 persons, is about 6,000*l*.

### GENERAL.

**Lord Derby** has purchased from the Walker Art Gallery two pictures by Mr. Joseph Knight, of Manchester—an oil painting, *The Raven's Crag*, and a water-colour, *In the Ogwen Valley*.

**The First Premium** in the competition for a proposed new market at Stoke-on-Trent has been awarded to the plans of Mr. Charles Lynam, and the second to those of Mr. Taylor, of Longton. Plans by Mr. Stevenson, of Manchester, have been reserved in case the cost of the plans of the two first mentioned exceed the estimates.

**Mr. J. A. Chatwin**, of Birmingham, has prepared plans for the proposed Art Gallery at Wolverhampton, and a contract for the erection of the building has been taken by Messrs. P. Horsman & Co., of Darlington Street, Wolverhampton.

**Lord Robartes** intends to build the north arcade of Truro Cathedral as a memorial of his father. The south arcade will be the memorial of the Hon. George Fortescue.

**Plans of Messrs. Giles & Brookhouse**, architects, of Derby, have been adopted for enlarging and restoring the parish church at Turnditch.

**Messrs. Heaton, Butler & Bayne** have filled the east window of Staplehurst Parish Church with stained glass, as a memorial of the late Mr. Henry Hoare and Lady Mary Hoare.

**Messrs. Braddock & Matthews**, of Southport, have obtained the contract for the construction of the branch line of the Caledonian Railway between Whiffle and Airdrie.

**The "Capitan Fracassa"** is informed that at the recent meeting of the Commission for the erection in Rome of the monument to Victor Emmanuel, Signor Depretis spoke warmly in favour of the monument being erected on the Capitol. Apparently, the site chosen is that where now stands the celebrated bronze equestrian statue of Marcus Aurelius, which will be removed and placed in a museum.

**A Peal of Bells** has been cast in Belgium for the church of St. Nicholas, Aberdeen.

**A Vicarage** is now in course of erection at Great Broughton from plans by Mr. W. C. Jennings, of Cockermouth.

**The Contract** for the erection of the new bridge across the Tees at Stockton has been taken by Messrs. Whitaker Bros., of Leeds, at the sum of 38,000*l*. The total cost is estimated at from 46,000*l*. to 56,000*l*.

**The National Competition Drawings** are now on view at the Manchester School of Art. They will afterwards be exhibited in Glasgow and Belfast.

**The New Buildings** at Somerville Hall, Oxford, will be opened during October. They were designed by Mr. T. G. Jackson.

**A Parochial Hall** is to be erected at a cost of 1,000*l*. in the parish of St. Jude, co. Dublin, in recognition of the services of Sir Garnet Wolseley.

**The Brentford Local Board** on Wednesday accepted provisionally tenders for the construction of extensive sewage works and of a river wall on the Thames near the town. The works are estimated to cost 25,000*l*., and have been designed by Messrs. Gotto & Beesley.

**The Trustees of the British Museum** have in the press a catalogue of early German prints compiled by Dr. Wiltshire. The collection of these prints is considered the finest in Europe.

**Miss Duthie**, of Aberdeen, has granted a site in the Duthie Park, which has been suggested by Sir Noel Paton, for the Wallace monument, which is to be presented to Aberdeen under the will of the late Mr. Steill, of Edinburgh. It is to take the form of a colossal statue in bronze to cost not more than 3,000*l*.

**A Tender** of Messrs. Laphorne & Goad, of Plymouth, has been accepted for the erection of the Plymouth Post Office. The cost of the building will probably be about 11,000*l*.



# The Architect.

## MR. AITCHISON ON THE CULTIVATION OF THE ARTS.



HE CONGRESS-CROP of the current year—if we may be permitted to use such a term without disrespect—seems to be, if not exceptionally good, at any rate of very fair quality all round; and, so far as fine art goes, we were able to report last week so many good papers and speeches that we may confess to a slight embarrassment now that we desire to say something

more concerning the best of them. Mr. AITCHISON, A.R.A., in the chair of the Art Section of the Social Science Congress at Nottingham, read an exceedingly interesting address on the Cultivation of the Arts. Mr. H. H. STATHAM discoursed with much good sense on the Conservation of Ancient Architectural Monuments. Mr. T. C. HORSFALL dealt with the great practical problem, how to bring the influence of art to bear upon the masses of the people in large towns. Mr. HODGSON PRATT expounded the policy of the Sunday Society in the same direction. The long-known critical writer, Mr. SAMUEL HUGGINS, discussed Church Restoration. Mr. P. H. RATHBONE took up the subject of Art Professorships. Besides these more formal dissertations, there were also plenty of extempore deliverances of opinion in debate. On the whole the Nottingham meeting has done well by art, whatever else it may have done better by, or worse. Out of so much material we may take leave to select the discourse of Mr. AITCHISON, if only because it came from the President of the Assembly.

The question why fine art should be considered a matter of social science is best answered by simply giving to the term "social science" a sufficiently comprehensive meaning; indeed this is the only way to dispose of it. The welfare of communities, as promoted by, amongst other influences, that of intellectual culture, is a perfectly fair rendering of the term; and if so, then one of the most attractive and genial of such influences is undeniably the enjoyment of the fine arts. Not only so, but the precise state of the cultivation and appreciation of fine art becomes one of the most veritable tests of the general progress of the people. Where art is despised or discouraged, or even no more than neglected, the graces of the mind must not be expected to be found. Where artistic sensitiveness is carried to excess or affectation, mental indiscipline and moral Bohemianism may always be looked for. But where earnestness and common-sense combine to confer upon the pursuit of art a character of calm, sincere, and steady assiduity, with sufficiently vigorous ambition and at the same time adequate self-restraint, the artistic faculty may be said to be almost at its best, or at least at its safest and most satisfying point of development. We are happy to think that England of to-day is by regular steps attaining this favourable position. We hold it, therefore, to be an idea especially characteristic of England just now that fine art is a question of social science. English people at large may have much yet to learn, but they have already learnt much; and the process by which the knowledge has been, and is to be acquired, and the particular results which its acquisition is to accomplish, are well worthy of scientific investigation on such ground in the public interest.

Mr. AITCHISON, although an unassuming man, has long been known for one who has opinions of his own coupled with the courage to declare them. He is an enthusiast and a logician combined. He can upon occasion demonstrate his propositions, or he can with equal decision decline to subject them to the indignity of argument. Now that he is in the Academy we must compare him with such men as BURGESS and STREET; for, although of quite a different school of thought, his mode of thinking is very much like theirs. They were above all things passionate; he is passionate also, although not above all things. Their processes of thinking were—so most people will say—eccentric; his are eccentric in the same sense. Theirs were violent, his are not. They took public taste by the throat; he takes it by the button-hole, which is at

least more conducive to quiet and profitable discussion, even in controversy.

Mr. AITCHISON touches the keynote of his doctrine when he says he would have every person who is interested, as so many are nowadays, in one or other of the fine arts, to take to the cultivation of the whole of them, as very few attempt to do. Firstly, this is to be for the sake of his own personal culture; secondly, for the sake of the public culture; and thirdly, for the encouragement of professional artists—the encouragement, of course, in a generous spirit, of a generous vocation, one of the most generous of all. That is to say, he would wish to see all specialist artists devoting their attention primarily to all art, and secondarily to their specialties; not, as the rule is, primarily to the specialties, and secondarily, if at all, to a vague understanding of the correlation of the arts as a whole. Some writers and speakers tell us now and then that all art is one art; but this is only a play upon the word and a paradox; what is true is that the intelligence of the specialist, when fairly applied to the superficialities, if no more, of as many other arts as he can undertake to know, acquired the very great advantage of discovering for itself an occult unity of purpose and of essence which pervades the whole, and the comprehension of which gives a peculiar force and vigour to his pursuit, whether of one or of all. In other words, he finds that the artistic aim is one, however many may be its manifestations; and the achievement of that aim one achievement, however various its forms. Nor is this all; for, as Mr. AITCHISON boldly says, "the contemplation of beauty is the true recreation of man;" the enjoyment of art is the most congenial of all amusements for the refined intellect, the wisest, the safest, and the surest. We may convince ourselves of this by looking around us from whatever standpoint we may chance to occupy; whether the business of life be science or philosophy, medicine or law, commerce or manufacture, the studies of travel or the explorations of archæology, even the adventures of warfare, or their opposite, the teachings of religion, the tired intelligence finds a relief, so welcome that it may not untruly be called the most welcome of all, in turning to the pleasing exercise of the imagination and the consideration of its charming productions. To call this "Art" is merely to give it a very general name; and to say that it has many forms, and call these "the Arts," is but to recognise our being endowed with many senses, and combinations of sense, to which the one virtue of successful fancy is equally able to appeal. No human creature is so low in the scale of mental development (excepting in cases of disease) that the graces—whether of form, of colour, of music, of movement, of speech, of simulation, or of thought—are not in some way or other a source of pleasure; and the higher the intellect aspires, the greater does this pleasure become.

Asceticism, says Mr. AITCHISON, is one thing which has hindered the development of art, and, we presume, its enjoyment. The present generation in England can speak feelingly on this point. There are more kinds of artistic asceticism than one; and perhaps that which was thrust down the throats of our forefathers by CROMWELL'S Puritans was almost less rather than more offensive than that which quite recently, by the violence of perverted archaicism, has been forced upon ourselves, and is indeed still being so although with a rapidly diminishing pressure. The contempt of the beautiful for the sake of art—if the terms of the proposition be not self-contradictory—is a doctrine that cannot but be most pernicious. Such vigour and muscularity are a mere affectation, not perhaps of the heart, but, what is much worse, of the head. To train one's judgment to dislike grace is the outcome of a very odd twist of culture, the strength of a strangely paradoxical intellect degenerating into a melancholy weakness. We may, however, now congratulate ourselves that the disagreeable era of this spurious masculinity is apparently drawing to a close. The gaunt beauties of so called pre-Raffaellite painting and sculpture, and the equally grim features of the corresponding fashion of building and decoration, so far as they were the intentionally dreadful exemplifications of perverted ingenuity and not the helpless conceits of struggling incapacity, seem to be getting out of fashion, and the influence of asceticism so far becoming a lost chord, which in our day at least it is to be hoped may never be recalled.

Mr. AITCHISON ventures to be severe upon the once so much admired art of "imitation Gothic." "Civilised man," he says, "should have some more feeling for dignity than to live in a house that is but a sort of aggregation of dog-kennels."



This is shocking language; and, if the colleagues of the new A.R.A. at Burlington House have half the "feeling" we used to give them credit for—or those who put them where they are—some of them ought to be found expostulating with him in phraseology, if a little more courteous, not a whit less uncompromising. The story goes that one of the "too, too" eminent apostles of revived mediævalism, upon being rallied one day by an admirer of the other persuasion, because he did not live in a Gothic house, had the shameful candour to confess that he was prepared to build any number of Gothic houses for such as liked them, but that to live in one of them himself was more than he could undertake to try! We make Mr. AITCHISON a present of this anecdote; and will only add that, when he comes to think his own thoughts in this wicked way, not of imitation Gothic houses alone, but possibly in the course of time—who can tell?—of imitation Gothic churches no less, we hope he may find gentler words in which to point out the fact that all such imitations, which are imitations and no more, are only imitations of that which is inimitable, namely, of genuine art.

But if, as Mr. AITCHISON further teaches us, "it is only under enthusiasm that man attains his full height," we can not only pardon the enthusiasm which characterises his own utterances, but go so far as to wish that other thinkers like him would take heart of grace, and speak as plainly as he does.

## IN VIENNA AND BUDA-PESTH WITH THE IRON AND STEEL INSTITUTE.

BY A CORRESPONDENT.

FOR the fourth time since its foundation the Iron and Steel Institute has held its autumn meeting away from England. After visiting Liège in 1873, Paris in 1878, and Düsseldorf in 1880, the Institute this year accepted a cordial invitation from the ironmasters of Austria and Hungary to hold its congress in Vienna, and make excursions to Gratz, Leoben, Buda-Pesth, Rechitza, &c.

Probably no English body has done so much to break down the barriers of class, of race, and of frontier as the Iron and Steel Institute. It welcomes men of every nationality, the only condition being that they contribute to the general stock of information as to the metallurgy of iron and steel, and thus further progress in that science. Never was there a more cosmopolitan *réunion* than that which assembled at Vienna on the morning of September 19. Besides Englishmen, there were Frenchmen, Belgians, Germans, Austrians, Swedes, and Americans, while speeches were made in French, German, and English.

The members were the immediate guests of the Ingenieur-und Architekten-Verein of Vienna, whose magnificent premises, and also those of the Building and Architecture Club adjoining, were placed at their disposal. The meetings were held in the handsome hall of the former body, which is admirably adapted to the purpose, the acoustic properties being perfect. It is, as may be supposed, in perfect taste, the walls being panelled throughout with different woods inlaid. A gallery, high up, supported by carved Caryatides, extends along three sides; while a spirited portrait of the Emperor, FRANCIS JOSEPH, hangs over the platform.

The members were warmly welcomed by the president of the reception committee, Herr C. AUGUST VON FREY, who is also president of the Vienna Alpine Club; by the Statthalter of Lower Austria in the name of the Government; by the burgomaster in the name of the city; and by the president of the Engineers and Architects' Association. On account of the regretted illness of the president of the Iron and Steel Institute (Mr. J. T. SMITH, of Barrow), Mr. I. LOWTHIAN BELL, M.P., past president, was called to the chair.

A paper by the eminent Austrian metallurgist, Prof. VON TUNNER, on "The Iron Industries of Styria and Carinthia"; and another by Prof. VON KERPELZ, of Buda-Pesth, on that of "Hungary," were read and duly acknowledged. The general secretary, Mr. J. S. JEANS, then read the third paper, by Herr A. KURZWERNHARD, of Teplitz, on "The Manufacture of Bessemer Steel with Brown Coal." This called forth a speech from Mr. PERCY GILCHRIST—one of the inventors of the THOMAS-GILCHRIST process—and who subsequently received, on behalf of his partner, a magnificent casket, made of THOMAS-GILCHRIST metal, presented by the Austrian Iron-

masters' Association, in token of their appreciation of the services rendered to their struggling industry.

The members then adjourned to an elegant luncheon in the Imperial Volksgarten, to which they were invited by the Austrian ironmasters. The great charm of this gathering, where all the surroundings were novel to the majority of the visitors, was enhanced by some delightful Strausslike music, played by the band of the 34th Austrian Infantry. The party next proceeded in omnibuses to the immense arsenal, a rectangular pile of buildings, erected from 1849 to 1855, and covering 331,200 square metres of ground. The entrance tower is surmounted with sandstone statues, by GASSER, representing Austria surrounded by the arts of war. At the opposite side of the pile is the chapel containing a statue of the Virgin, which is held in high esteem on account of its having escaped injury in the destruction of the former arsenal during the insurrection. Within the rectangle formed by the barracks and magazines is the Waffen Museum, in rich Roman style, by HANSEN, containing twelve groups of pillars, ornamented with fifty-two white marble statues of the heroes of Austrian history. The upper floor contains a most interesting collection of historical relics connected with the House of HAPSBURG. This day's proceedings, in which the *utile* was at least equalled by the *dulce*, were wound up by the annual banquet of the Institute.

On the following day, the 20th, Professor WEDDING, of Berlin, read a paper describing the work of the Prussian State Institute for testing iron and steel used for constructive purposes. In the discussion which followed, the members were, on the whole, averse to any intervention of the Government in the matter, at least so far as England is concerned, but thought that a technical body like the Iron and Steel Institute might undertake the official testing with advantage. After a paper on "Recent Progress in the Manufacture of Steel Castings" had been read by M. POURCEL, of the Terre-Noire Steel Works, the meeting was adjourned at the early hour of twelve. The members then visited the premises in Vienna of the Danube Steam Navigation Company, and proceeded in steamers provided by that company along the newly-regulated Danube as far as Nussdorff, whence they ascended, by the central rack-rail railway, to the top of the Kahlenberg Hill, from which a magnificent view of Vienna was obtained, the city appearing stretched out like a map. Luncheon was served, through the hospitality of the city of Vienna, at the large hotel, formerly a nunnery; and, after admiring the hanging woods, the party descended in the same way through the vineyards which produce one of the choicest wines of the country.

On the third and last day of the meeting, M. POURCEL'S paper formed the subject of a long technical discussion, to which that gentleman replied eloquently in French. Mr. LOWTHIAN BELL, M.P., Mr. SNELUS, and Mr. JOHN GJERS all read papers on metallurgical subjects, which were briefly discussed. Cordial votes of thanks were accorded to those to whom the Institute was indebted for favours; that to the Engineers and Architects' Association, for the use of their premises, called forth an eloquent speech in French from M. A. NOBLET, of Liège, in which he expressed the sentiment that when scientific bodies are thus sumptuously lodged, they give evidence of exerting great influence on the industrial advance of their country.

After partaking of luncheon in the Imperial Volksgarten, as on Tuesday, the members were taken in hand by the leading architects of Vienna, and conducted in parties over the new Parliaments Gebäude, the Rathaus, and the University, pausing as they passed to deplore the destruction of the Ring Theatre, the site of which is now cleared, ready for a new building. It was remarked with a certain amount of surprise that, notwithstanding the propinquity of Vienna to beds of excellent building stone on the banks of the Danube, and therefore easy of conveyance, a large proportion of the houses in Vienna are built of brick faced with stucco. Some of the members visited the Imperial Summer Palace at Schönbrunn, while others inspected the locomotive works at Floridsdorf, crossing the Danube by a fine wrought-iron girder bridge. In the evening a most agreeable *réunion*, with dancing to a splendid band, was given by the local committee in the fine hall of the Gartenbau Gesellschaft.

This agreeable *fête* brought to a close the doings at Vienna, and on the following morning the members separated into two parties. One party, with the president, proceeded by the Southern Railway to Mürzzuschlag, the Neuberg Steel Works, Leoben, Segeabben, Donawitz, Trofaiach, Nordenberg, the



Handharp, Praebicht, and Gratz, where they were hospitably entertained by their *confrères* of the Styrian iron trade.

The other party, with two vice-presidents and the general secretary, proceeded by the Austrian Staatsbahn to Buda-Pesth, the capital of Hungary, and certainly had no cause to repent their selection. The special train was composed of new carriages, on the American continuous principle, that had been hastened forward for the occasion; and the visitors appeared greatly to enjoy the walking from one carriage to another and, after the great plain of Hungary had been traversed, admiring the grand scenery on the banks of the Danube. At Pressburg, as the train drew up to the platform, a surprise was in store for the party. They were saluted with strains from a real Hungarian band, in which the stringed "cymbalus" takes the place of wind instruments; and here a very welcome luncheon was spread in the waiting-rooms. The pleasant looks and quaint costumes of the inhabitants, the fruit and flowers on the table, the variety of light Hungarian wines, and the Oriental tinge which embraced all the surroundings, lent a charm to this hurried repast which can never be forgotten. On re-entering the carriages, the train soon passed round the cathedral, and Bishop's Palace, of Pressburg, that looks like a Turkish mosque, and which was seen to great advantage in the beams of the morning sun, standing out against a background of high hills.

On reaching Buda-Pesth, the members were welcomed by the reception committee and billeted off to the leading hotels, being then left to their own devices until the evening. At seven o'clock they were entertained at a magnificent banquet, of quite a Hungarian character, at the Grand Hotel Europa, in a splendid hall, the roof of which is supported by massive columns of grey marble. Loyal and other toasts were drunk in Hungarian champagne; speeches were made in almost all European languages, and nothing could exceed the cordiality of both hosts and guests, who seemed equally charmed with each other.

On the following day, Saturday, 23rd, the party proceeded by steamer on the Danube to the engineering works of GANZ & Co., one of whose specialties is the making of Hungarian roller mills. They then inspected the works of the Danube Shipbuilding Company, the manager of which is an Englishman, Mr. MOORE JACKSON. Besides examining in detail the various departments, in one or other of which everything connected with a vessel is manufactured, the visitors were much interested in two Roman baths discovered here about six years ago while digging the foundations of a building. They are in a remarkably good state of preservation—all the flues for heating, the piscina, the seats, &c., being clearly traceable. It is said that the frescoes on the walls were as fresh when discovered as on the day they were painted, while the casual scribbling on the wall of a bather could also be deciphered as at Pompeii.

As the party entered the foundry a ladleful of metal was run into a mould, arranged so as to form in glowing letters the words "Welcome to the Iron and Steel Institute;" and then the remainder of the charge was run into the centre of a pile of foundry sand, running down the sides and sending up volumes of flame and showers of sparks to imitate a volcano in eruption.

Another surprise awaited the visitors immediately after they had regained the steamer through a double file of firemen. The bugle sounded an alarm, as if a house, represented by the adjoining magazine, was on fire, and the firemen all rushed to their posts. A man jumped out of a window, being caught in a contrivance for the purpose; and a woman with a baby appeared at an upper window. With scaling-ladders the men mounted the walls, and lowered the woman in a fire-escape, while the steam fire-engine played far higher than the four-storey building. As soon as the fire was supposed to be extinguished, the firemen who had entered the house were lowered slowly, one after another, by means of a waist-band, hook, and rope, keeping themselves clear of the wall by their outstretched legs, and having their arms free to render assistance.

Passing a cascade of mineral water on the Margaréthen Insel the party were landed on that island, which is the property of the Archduke JOSEPH, the cousin of the king, and contains his summer palace. It is open to the public, and, being beautifully wooded, serves for a promenade. After a luncheon in the restaurant, and some more Hungarian music, the members inspected the locomotive works of the Hungarian State Railways.

In the evening a special performance was given in honour of the Institute at the Volkstheater, a piece being specially selected to illustrate the national character, costumes, music, and dances. This splendid building, designed by FELLNER, was only completed in 1880, and is distinguished by great width of stage in proportion to the height. It is built entirely of stone and iron, and an iron curtain with large meshes can be let down from the outside in case of fire.

After spending the following day in admiring the beauties of the town and scenery the party again split up, one portion going to see the ironworks of Salgó-Torian, and the other proceeding to the extreme south-east of the kingdom, near the Bulgarian frontier, to visit the new Rechitza Steel Works, which are doing a great deal towards carrying Western civilisation Eastwards.

The practical difficulties attending the construction of the Tower of Babel can never, perhaps, be more fully realised than at Buda-Pesth, for here the confusion of tongues is great indeed, and the first question is, "What do you speak?" The Hungarians, of course, use their native Magyar tongue, while German is the language of commerce. Then there are a large Slavonic and Bohemian population, and some Italians and Servians. French is, of course, spoken more or less; and English is spoken to a remarkable extent considering that there are no very direct relations between England and Hungary. Indeed, an English club has lately been started, not of Englishmen, but for cultivating the English language.

The new portion of the city is most beautiful, situated as it is, the old portion, Buda or Ofen, on the right bank of the Danube, and the new and larger portion, Pesth, on the left bank.

Taking a drive through the city of Buda in a *zweispänner*, or two-horse chaise, we start from its nucleus, the Stadt-haus, which is the oldest building, and pass the new, handsome, and very extensive Post-gebäude, in the Italian style, as are most of the buildings in Buda-Pesth. We drive through the two most frequented streets—viz., the Hatwan-gasse and Weitzner-gasse—and see the Seviten and Franciscan churches. We pass the Athenæum; the Kasino, where the *élite* of Buda-Pesth amuses itself; and the National Theatre.

Traversing the Karapaser Strasse, about fifty mètres wide, we enter a typical house. It has a large square well staircase in the middle, with separate apartments on the different floors, and a balcony running the whole length of the back. The floor is of mosaic, and the steps of roughly-hewn red marble, while the ceiling is decorated with a mythological subject in fresco, in a frame giving the appearance of raised-moulding. Many of the rooms, especially in the basement floor, have domed or arched ceilings like those of Italian houses; and, indeed, the strong impression of being in Italy is favoured by the rows of acacia-trees in the streets and the bare feet and costume of the passers-by.

Nearly every house has double windows, with a space of six inches between. The outer casements open outwards, and the inner inwards. The latter are secured by a kind of turning latch, which clasps them both tight, and the former by hooks drawn tight over the upright. Very frequently one pane of the outer casement opens separately. Persiennes are used in aspects exposed to the sun, and either the slats are movable to different angles, or the bottom part of the blind or shutter may be pushed outwards.

Continuing our drive, we enter the fine Central Strasse, the longest and widest street in the city. We pass the Wagner Opera-house, being built at the King's expense at a cost of 280,000*l.*, and to be completed in 1884. We notice a pile of old bricks, 12 by 6 by 2½ inches, which are no longer used, being replaced, on the adoption of the metrical system, by those of 25 by 12 by 6 centimètres.

The Oktogone recalls the rond-point of the Champs Elysées, Paris, but a better effect might have been produced with the houses, uniform on all the eight sides, as they look plain without cornice, and with a higher portion in the middle of either side. We pass in succession a private palace adorned with rich mosaics; the Musik Akademie, with front perfectly flat, but decorated with a band of large encaustic tiles; the Kunstler Haus and the Kunst Akademie, the front of which is also perfectly flat, but decorated with gold and dull colours in fresco.

We now enter the suburban portion of the street, which is shortly to be called Andrassy-Strasse. It gives one the idea of Palace Gardens, Kensington, but the villas are far more artistic



and original. There are indeed some remarkable specimens of various styles of architecture that are well worth an autumn holiday's visit.

Turning now into the Stadt Wald, a beautiful park, we admire the fine fountain constructed in remembrance of the Princess STEPHANIE's entry last year, and catch a glimpse, in passing, of the Wertas Mountains in the distance. Leaving, on the right, the Arena Theatre, built in the old style of framed timber filled in with bricks, we drive along an avenue of fine old acacia-trees, and see the Arm-haus, for the accommodation of 100,000 poor people, and the old citadel, built by the Turks in 1450, at the top of the Gallert Hill. Passing the Jewish Blind Asylum, we came upon the site of the central station, whence, when completed, eighty trains a day are to start.

All important buildings are of stone, and present a very imposing appearance, though none are very old. A walk along the Donau Quai and Corso on a moonlight night, with the hills of Buda rising in wild irregularity on the other side, dotted with houses and sparkling with the street lamps and coloured lanterns, affords a fairy spectacle which is truly *wonderschön*.

The three hotels in which the members of the Iron and Steel Institute were drafted are the Hungaria, the Europa, and the National. The first is certainly very grand and has more than three hundred bedrooms; but both this and the second are reported as being very dear. Your correspondent purposely waited until the last to receive his billet, in order not to go to a cosmopolitan hotel; and he quite succeeded in his object of seeing indigenous customs by putting up at the National. The *cuisine* is entirely Hungarian, including the favourite *páprika-hahn*, or fowl stewed with red pepper. Everyone is civil without being obtrusive, the landlord taking almost a paternal interest in his guests. The charges are certainly most moderate, and as the custom is for each meal to be paid for at the time, there are no long bills to run up. Having preserved the labels of two red Hungarian wines that I have tried and found delicious, I transcribe their names, Villányi ó Bor, 1 gulden (1s. 8d.), and Budai Sashegyi, 1 gulden 40 (2s. 2d.), a bottle. What a delightful country, where the wine is so cheap that it is not worth while to adulterate it!

On the occasion of the marriage of the Archduke RUDOLPH of Austria with the Princess STEPHANIE of Belgium, second-class return tickets, available for a month, were established between the two capitals of Vienna and Brussels for about 6*l.*, and have continued in force during the summer months. The journey from Vienna to Buda-Pesth can be made cheaply and agreeably by steamboat on the Danube, and that from London to Brussels by the Great Eastern Co.'s excellent daily service of steamers to Antwerp.

### SIR EDMUND BECKETT, Q.C., ON SCIENCE AND ART.

THE prizes obtained by the students of the St. Albans School of Science and Art were handed to the students on Wednesday in last week by Sir Edmund Beckett, Q.C.

In addressing the meeting Sir Edmund Beckett said his mind was in an entirely unscientific state as to the business of that evening. All he knew was that there was a School of Art and a School of Science, in connection with which they had met. Science was a very good thing, and art in its way was a very good thing too, but he was afraid that both subjects and the meaning of both words were a good deal less understood than they should be, and he was afraid that owing to that want of understanding the two things were commonly put together nowadays. He remembered that some years ago Cardinal Wiseman was invited to give a lecture in London on what was called the connection between science and art. He (the speaker) was very curious to know what the Cardinal would manage to say of that connection. If anybody could make out a good case at all he was sure that the Cardinal could do it. However they might differ from each other on one subject—on the subject of art and in some degree on the subject of science they would all agree that the Cardinal was as capable of talking as anybody. So he set to work; he gave a very ingenious and amusing lecture, full of more eloquence than he (Sir Edmund) could give them. When he arrived at the end of the Cardinal's lecture he amused himself by thinking, "How much real connection between science and art has this good gentleman shown?" It seemed to him to resolve itself into this: Being the distinguished person he was in the Roman Catholic Church and spending a good deal of time at Rome, the Cardinal naturally talked of St. Peter's—a triumph of art of a certain kind, belonging to a city in the world

now the most famous of any for art. So Cardinal Wiseman thought he could not go wrong in talking of St. Peter's, and he said something of this kind—that St. Peter's was a very famous place, a triumph of art, its dome was the largest in the world, and taking height and width together was the largest in the world; the dome cracked, and so people had to set to work to mend it. That was very shabby and disgusting language to use about such a thing as St. Peter's; and it was not the Cardinal's, but his. He was in the habit of "boiling things down," and seeing what the meaning of a thing was reduced to its simplest elements. The best case the Cardinal could make out in support of his idea was that the dome of St. Peter's cracked, and that scientific men got to work to mend it, and mended it by putting a chain round it. That did not seem to him (the speaker) much like a connection between science and art; it seemed to him rather like a severance. It appeared to show that the artistic people who designed the dome had not much science, and it certainly demonstrated that the scientific people had not much art. He had been thinking about a good many things of the same kind with a view to finding the connection between science and art, until the other day he read one of the papers which the secretary of the school was good enough to send him. There he saw that the students painted on china, and that the china was fired or burnt afterwards. That was a connection between science and art, no doubt. There was the art of painting, but the art of painting would not do much in regard to china without the science or art of burning. Art was a multiplex subject. It meant a good many things. There was the art of making bread, and the art of making clothes. People who called themselves artists were equally liberal and comprehensive in their terms. He had had to do a good deal with architects, and he always found they for some reason or other wished to call themselves artists, though he had never been able to make out why. It seemed to him that an architect was not an artist. An artist must do something with his fingers; it was not with his mind he worked entirely. An architect did not do anything with his fingers; he produced no result; he simply told people how they were to lay out a work. That circumstance suggested to his mind the fact that there were a number of people who claimed the title of artists with much better reason than architects. There was a good deal of talk about art, but he suspected that many people did not know what they were talking about. Who were artists? Painters and sculptors were; no doubt about them. In modern times singers were called artists in the newspapers. He did not know much about singing, and never went to the opera. Actors were often called artists. Going a little further down, he thought he had heard hairdressers called artists. Dressmakers were frequently called artists, and he knew also that tailors were called artists. So they ought to be, because they produced very excellent results, and he was not sure but that when they had good subjects to work upon—very unlike him—they produced more successful results than architects generally. He remembered once giving tremendous offence at the Architectural Museum, or some such place where he was making a speech, by venturing to say that the carvers who executed the ornamental work, such as was now going on at St. Albans Abbey, were really people of almost as great importance as the architects themselves. Some would not speak to him for a week after he made that statement. Yet surely they could not deny that a carver was an artist. The man got up on a scaffold, and with his few tools chiselled out those flowers and heads such as might now be seen by going to the west front of the Abbey. An architect could do nothing of the kind, though he might do what was much greater if he did it well. Art, if it meant anything, meant the art to do something; it might be a good or a bad thing; by usage it might come to be associated with a beautiful thing, or what people called beautiful. But it was very difficult to say what was beautiful, for there was no canon of beauty that he knew of; no rule, except a certain amount of similarity to Nature. He was certain of this, that there was no unquestionable standard of beauty except Nature. Nature never copied herself. There were millions of leaves on trees, but he defied them to find two alike. This was a lesson he had endeavoured to impress upon the workmen with whom he had to do here and elsewhere. They imitated their work to too great an extent; he urged them not to be too exact, but to use a little freedom. Let them remember what Nature did and what the old builders did. He had pointed out to workmen over and over again pieces of old work. He had asked them to look at a moulding. Examining it at first the moulding would seem to be the same throughout; but close inspection showed that the work varied. The old builders' workmen were really artists, and they did as Nature did. They made both sides of their buildings tolerably alike and symmetrical, just as both legs, and arms, and the two sides of a man's face were alike. But let anyone hold up his two hands and look closely at them, and he would find that they were different. The two sides of a person's face are not exactly alike. The same thing applied to the colours of animals. Did they ever find two dogs or tigers coloured alike, or with both sides alike? That was the way with Nature, working by general uniformity, and not by precise and particular uniformity. Nature never copied herself. What he had said was the result of observation of Nature, which was the source of all beauty. What did they mean by Nature? There were a



set of philosophers nowadays who were always ready to tell them that Nature did everything, and that what they called "natural selection" did everything. What was Nature? Most of them had heard, he had no doubt, of Professor Huxley, who is considered a most advanced philosopher, a gentleman who believed in nothing but matter—and himself, as a great man said once. What did Professor Huxley say? He was too much of a philosopher, whatever else he might be, not to know the true meaning of Nature. He said, "Nature was only the general result of all causes." He might have said—they were not exactly his words, but he might easily have said—"Nature is the result of all causes, and the cause of no result." Nature could not be talked of as if she were the inventor and creator of all things. Let them look at what the thing called Nature had done in the way of beauty. Some of them had been reading, he had no doubt, that the colours of flowers were produced by the action of bees. That might be true to a certain extent, but let them consider to what a small extent it went. What were bees fondest of? According to his observation in that neighbourhood they were fondest of mignonette flowers and lime-trees. There was a fine tree of that kind in the rectory garden, and he never went there without being struck with the number of bees about that tree. How much colour had the bees managed to impart to those two favourites of theirs—mignonette and the lime-tree. They were two of the dullest coloured things in Nature. According to the philosophy to which he had referred, bees had been at work millions of years making colours, but they had laid none on those two things. He said therefore that they had been a very small cause. If bees had made the colours of the trees, had they made them the shape they were? had they made the beauty of hills and dales and mountains, and all the forms of water and clouds and ice and snow and everything of that kind? That which they called Nature had made those things, and these again it was the object of art to imitate. They imitated them in pictures; and in other ways they might imitate them by having regard to their results. As a great man said some time ago:—Take the rainbow, the most beautiful thing in Nature, and the northern lights, or *aurora borealis*—what was it produced them? The regular laws of Nature were the cause. It would take a good many bees to account for the *aurora borealis*, or the rainbow either. They heard this phrase used very glibly—art and Nature. Art meant nothing except producing beautiful results, or not even beautiful results; useful results, or not even useful results—for there might be an art of doing bad things: Nature was the result of natural causes—the action of all causes, the action of the Creator, and nothing else. So much then for the kind of art of which he had spoken. Next came science. He had begun by pointing out that although that was a school of science and art, there was very little connection between the two things. It did not follow, however, that all things to be learnt together should be connected. There were very little connection between classics and mathematics—yet they ought both to be learnt. The real distinction between art and science was that art was uncertain and science was certain, or ought to be certain. A great many people talked about science and pretended to arrive at certain results when they were very uncertain in their knowledge. That was not true science. Science was simply a fine word for knowledge, and knowledge was certainty, or such certainty as was to be achieved. Mathematics was the only branch of science in which certainty existed. If a man thought to show him that the two sides of a triangle together measured no more than its third side, he said to that man, "Sir, you are a lunatic. That is only fit for a lunatic asylum. Go there to be believed; don't come and teach it here." So it was with everything connected with mathematics. He had been looking over the books to be awarded as prizes, and he saw that one of them was on linear perspective. Linear perspective was mathematics—there is certainty; and that reminded him, by-the-by, talking about art, that many artists had not the slightest idea about perspective. If a man told him that his colours were right, he could not tell him that they were not, not having the knowledge which the artist was supposed to have on that point; but if a person told him that a drawing which was manifestly out of perspective was in perspective, he could say, "Sir, I know you are wrong. You may just as well tell me that four times four are fifteen." Coming to another part of the list, he saw that free-hand drawing was taught in the school; that was hardly what might be called a certain subject, though a near approach to it and a valuable study. He was glad to see that among the prizes was a book on practical geometry; there was also a volume on "Practical Rules of Drawing." He could not say that he thought much of painting on china, which was one of the things taught in the school. Having gone through the list, he was sorry to say that he must, after all, end as he began. He was going to parody the saying of a great man, but he must tell them the story first. They had all heard of Sydney Smith. He was invited by a nobleman who was not celebrated for hospitality to go and see his house and pictures. Smith accepted the invitation, but on going to the house was treated with a shabby luncheon. He, however, was shown a lot of gildings and fine pictures. When he was about to leave, the host said to him, "Well, Mr. Smith, I hope you like it." Smith replied, "Oh yes, it is all very fine; but I would rather have seen more carving and less gilding." So he

(Sir Edmund Beckett) would rather have seen in connection with the school more science and less art. They must, however, take things as they found them. It was better to do art than nothing, though he had not a high opinion of it from its uncertainty, and other qualities which he would not now mention. He thought by this time he had detained them quite long enough; well if they wanted a little more they should have it.

There was one other thing mentioned to him by the secretary. He did not see it in the list of prizes, but in his letter to him, the secretary said that they also taught the art of building in the school. He was very glad to hear it. He hoped they did; but inasmuch as he did not know how they taught it, he could not do more than express his opinion that it was an art that very much wanted teaching. A great many errors had crept into it. There was one error with regard to the old builders which he should like to correct. It was said that the builders of old times knew a great deal of science and art. Of art they did know something, but of science little. Among other characteristics of art, there was one thing to be noticed, which was that it did not, somehow or other, accompany and go along with civilisation, as one might expect. It seemed somewhat to get squashed by civilisation. People nowadays were infinitely above savages in knowledge; yet they lacked notions of art, which some savages possess. Ever so long ago, when he was at college, they used to be shown some weapons made by South Sea Islanders out of stones and sticks. When they came to be examined, he found that the handles of the weapons were decorated and cut rather nicely. In Indian art the work in silver and brass was very beautiful—beautiful in shape, beautiful in ornamentation, and following Nature in not being too uniform. Let them take the statuary of Greece, the most famous in the world. They had very little science in those days, and even in the Roman days. At the time the best English buildings were done, and when the Abbey of St. Albans was erected, down to the fourteenth century, when the work manifestly began to deteriorate, there was hardly any science. People thought there must have been a tremendous lot of science among the old builders, because they constructed those high towers, stone vaults, and other things of the kind. But he had been behind the scenes and found that a great deal of that work was done very badly indeed. It was true they had science enough to make their buildings stand for a number of years, but they were bad builders; did not know how to make their mortar; they did not know how to select their stone; they designed contrary to all rules of mathematics, and therefore contrary to all rules of mechanics; the buildings began to split and almost to fall down from time to time. So it was at St. Albans. The Abbey had been a succession of ruins and repairs from the earliest times until now. The state of a great deal of it had been before their eyes in the last three or four years. Therefore, they should not run away with the idea that the old builders, by some sort of inspiration or magic, possessed science and art. John de Cellâ was a bad architect; he did not know how to build and make his work stand, or what sort of mortar he should use. He knew nothing of those things, though he was a good artist as far as mere beauty went. If they taught in that school the art of building he hoped they would teach how to make mortar, how to make proper abutments for arches to stand against; not allowing large arches to rest against 9-inch walls, as was done in the case of the abbey. Two or three architects wanted to do the same thing again, and more than two or three—the whole Institute of Architects wanted to do it, and if they hadn't had such an obstinate customer as he was to deal with they would have succeeded. He liked walls like himself. Where John de Cellâ had a wall nine inches thick, over which he put a great arch and window; he had put nine feet. He did not wish to impose his figures on everybody, but what he had done was the result of mathematical teaching. If they were going to begin building let them begin at the bottom, with a mathematical knowledge of mechanics. Mothers with young gentlemen who could draw "pretty things," put their sons into architects' offices, there to develop their admirable tastes. A young man of this sort was set to work to copy his master's specifications and drawings. He did that over and over again; then the parents paid the architect 300*l.* or 400*l.*; afterwards the young gentleman took an office, affixed a brass plate to his door, and he was "an architect."

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**The Black Gate, Newcastle-on-Tyne.**—At the last meeting of the Newcastle Society of Antiquaries, it was reported that the committee dealing with the question of the Black Gate had a meeting at which Mr. Johnson, architect, laid before them views and elevations of the Black Gate in its present condition. The question arose as to what kind of a roof should be put upon the structure. There was no evidence as to what roof had been upon it previously, and it seemed to be a question of cost, whether to put on a flat roof or a pitch roof. A flat roof, if of lead, would be more costly, but it might be made partly of glass. The question, however, was not definitely decided. As to the number of floors, they had decided upon making three, but it was left an open question whether the third floor should be lighted from the sides or from the roof.



## PAINTING IN RUSSIA.

A CORRESPONDENT of the *Times* has visited the Moscow Exhibition, and sends the following account of some of the pictures by Russian artists:—

I am afraid we do not know much in England of the artists of Russia. I distinguish between Russian art and the artists of Russia for reasons to which I may revert. Vereschagin is a recognised name, and so is Aivassofsky. They are both represented at Moscow, but not in their strength. There are none of the great pictures of Turkestan which introduced Vereschagin to London, first at the Crystal Palace and then at South Kensington. Something is said about Vereschagin being just now out of favour in his native country. There is a suggestion that he has depicted too much of the miseries of war, which may be permitted in a Callot, since no one can suppose that what he had seen in his native Lorraine in his generation could happen now, but is a grievous error on the part of a patriotic Russian. So the gossip runs that Vereschagin was not asked to send any of his larger pictures, and there are only seven of a cabinet size which have been collected for exhibition. One of them, a group of Tartar opium smokers, I remember seeing in Paris in 1867, when I first made the acquaintance of Vereschagin's work. It is greyer in tone than his later pictures, and in this respect probably shows the influence of his master Gérôme. Two others are after-battle scenes from Tashkend, and both sufficiently grim. In one of them two men are going over the field, one decapitating the dead, while the other receives the severed heads in a sack. The head of a young Russian has been cut off, and is being held up and inspected in a careless fashion before being tossed into the bag. A strong natural affinity certainly drew Vereschagin to Gérôme's *atelier*. Each is as resolute as Swift in exposing the brutality of man, although Gérôme expounds the doctrine with more varied illustrations. By-the-by, *The Duel after the Masked Ball* is in the Academy at St. Petersburg. Every one knows the reproductions of this picture in photographs and etchings, but I do not know whether every one has been struck with what impressed me more than ever in studying the original—namely, the extraordinary suggestion of unruffled wickedness in the walk of the harlequin who is going off arm-in-arm with the huron. Another of Vereschagin's pictures is a view of the Taj Mehal. This must have been sketched when he was in India eight years ago, and some Anglo-Indians doubted whether a possible Russian spy should be permitted to make drawings about the country. The view is taken a little up on the river, and secures the white reflection of the dome in the water; but the special character of the Taj cannot be seized in this way. The supreme, the unique loveliness of this memorial of love lies in the association of tomb and garden; the beauty of each makes perfect the beauty of the other, and the memory of the dead queen is preserved for ever in a shrine of pensive submission and of peace. The genius of Vereschagin is not, perhaps, in complete accord with the spirit of the scene he has attempted to reproduce.

It may be questioned whether the ruthless character of Vereschagin's art, a character as apparent in the drawing of a mosque as in the presentment of a man, is common among his countrymen. There is no evidence in this exhibition that it is so. Some trace of it may be supposed to be found in a picture of great power by Bronnikoff, but in truth the sentiment is here altogether distinct. It is a gallows field, a *campus sceleratus*, where on a row of crosses receding from the spectator hang the bodies of as many men. Away on the right is a passer-by, taking little note of the dismal spectacle at his side, while in the middle foreground is a crouched form of a woman in agony, whom we may suppose to be the mother of the young man hanging dead above her. The thought of Rizpah, the daughter of Aiah, involuntarily comes into the mind, but the painter could not have had her story before him, for the down-stricken woman is not protecting the dead from outrage, and they, indeed, number eight instead of seven. The picture is strong, but it has also a noble quality of pathos, and we read in it, not the brutality of man, but an awful sense of the sanctions of violated law. There is, in fact, more affinity with Vereschagin in another picture by Répine, which some may remember to have seen at Paris in 1878. A squad of hapless men are towing a heavily-laden barge up the Volga. They are struggling along on the sandy bank of the river beneath a fierce sun, and they exhibit in their figures all ages and degrees of development of social misery, if not of actual crime. The scene is pitiless, but the picture is a real picture, and not an essay on the treatment of criminals.

A certain number of scenes of Gospel history are exhibited—more, I think, than we should find in a corresponding collection in England—and they are characterised by much independence of tradition in their treatment. One, a great favourite with visitors, represents Judas going out from the Last Supper. It is by Nicholas Nicholaievitch Gee, and the artist has remembered, what very few painters have borne in mind, the words of the Evangelist, "He then having received the sop went immediately out: and it was night." Often as the Supper has been represented, I do not remember a suggestion of night in the pictures so well known. Judas is standing, facing the spectator, on his way outwards, but his face is in complete gloom, for the illumination of the room

comes from a torch immediately behind him. This light is at the same time thrown vividly on the disciples, who are in the background, and on Christ, who is on the left, half reclining, troubled in spirit, waiting for that which shall come. The arrangement may be thought somewhat theatrical, but it is honestly conceived, and has a striking effect. The same painter exhibits the *Agony in the Garden* more in accordance with tradition; but another depicter of the same scene, Letofschensko, represents Christ advancing alone beneath a grey moonlight. Another artist of considerable merit, whose imagination has brooded over Christian history, is Semeradsky. In one of his pictures Christ and His disciples are passing a house and garden of revelry. No such incident is directly described in the Gospel history, but it may be easily inferred, and as the painter has conceived it the approach of the Teacher strangely stirs, and here and there awakens the slumbering consciences of the people of pleasure. In another picture by Semeradsky, which was at Paris, we have an illustration of the persecution of the early Church at Rome. Roman luxury and pomp fill the greater part of the picture, with Caesar himself borne across it, and the spectator may be reminded of *La Décadence des Romains*, by Couture, at the Luxembourg; but on the right some half-a-dozen Christians are triced up against poles in the air with tow and other combustible materials swathed about their feet, so that they may make a festal flare at nightfall. Some watch these preparations with languid curiosity, but caricatures scratched on the wood represent the popular view of the superstitions of this Jewish sect, and each pole has a formal tablet attached declaring the upborne martyr one of the enemies of the human race. There is, perhaps, a little tendency to blackness in some of the shadows of the picture, but it is, on the whole, very well composed and brilliant in its effect. A word should be said for an *Entombment* by Kosheleff. No event has been oftener depicted, but the Russian artist represents the body of Christ borne on a bier, headed by Joseph of Arimathea and accompanied by his mother and weeping disciples, to the sepulchre hewn out in the rock in the garden. The grave funeral procession is certainly as impressive as the familiar pictures in which attention is drawn to the handling of a helpless corpse.

Aivassofsky would naturally lead the way among painters of land and sea; and his admirers, among whom I confess I have never been able to count myself, will find eight or nine pictures of his here fairly characteristic of his power. Bogoluboff has a couple of good pictures of Moscow and a very fair one of St. Petersburg fixed in ice. Klever has a winter scene near Revel, which struck me. Lindholm (*A Steamer Making its Way Through Ice*), Oldenbyrski, and Sydkofski may be mentioned.

There is a fair proportion of *genre* pictures, which probably derived their inspiration from Paris rather than Russia. Berndtson and Bekker are names known in the Salon, and Edelfeldt has managed to exhibit an illustration of the Revolutionary period of 1793 in the person of a girl who might be taken by some as Charlotte Corday. Reggione (who must be of Italian origin, if not of Italian birth) exhibits some illustrations of the lives of cardinals at Rome, such as Heilbuth used to amuse us with, and Postnekoff, along with a catechising scene at St. Clement's, in Rome, has a chorus of dancing maidens on St. John's Eve, which is a kind of sober reminiscence of Jules Breton's exquisite scene. A picture by Ivanoff of boys bathing is more akin to poor Fred Walker's work. Basil Maksemoff has an illustration of peasant life, full of grave and simple feeling, reminding one of the genius of Israels. Vladimir Makofsky, on the other hand, exhibits some half-a-dozen pictures full of delightful native humour. An old lady going to church with a page behind her carrying her books of devotion is a type not unknown elsewhere. Richer in feeling is a picture of an old married couple at the piano playing a duet.

On the whole, the Russian artists may be credited with a certain freshness of spirit, akin to original genius, if it be true that in their choice of subjects we are often reminded of what has been done by apparent precursors and tutors of other lands; but I fear it would be very misleading to attempt to deduce any characteristics of Russian art from these works of artists of Russia. These men are but a handful, and their pictures are known and appreciated by a comparatively limited number. There is a French theatre at St. Petersburg, but the dramatic art of Russia is not to be found there; nor is its pictorial art to be found among these painters. In the churches, the houses, the dress, and, where reading is widely disseminated, among its illustrated books, the range and character of a national art may be detected; and, tried by these standards, the artistic development of the Russian people is extremely limited.

**Winchester.**—The church of St. Michael has been reopened, consequent on the completion of various alterations and improvements carried out under the direction of Mr. Butterfield. The exterior works are executed in stone and flint, the walls of the east gable and the porch being in chequered or diapered work, in harmony with ancient Gothic work. A new south porch is erected close to the tower, and will materially strengthen that ancient work, pending the reconstruction of its ruined arch, which, with other work, must depend on the necessary funds being obtained.



## LOCAL INFLUENCE IN ENGLISH ART.

THE annual meeting of the Reigate School of Art was held on September 28, when an address by Mr. S. W. Kershaw, F.S.A., was read by Mr. R. L. Hesketh in the absence of the author. The following is an extract:—

To us here and art students, our English school will have greatest interest. The subjects depicted are most allied to national feelings, habits, and thoughts. A very helpful lesson is this school of art, for vigorous and changeable like our climate is our modern English school. We have examples on all sides for guidance in subject and treatment—for cattle with landscape, the well-known Sidney Cooper, R.A.; and for scenery, be it the rocky shore, the mountain side, the wooded slope, or the river's course, we have the works of J. E. Millais, Brett, Vicat Cole, W. B. Davis, Peter Graham, Linnell, and many others. In history, both sacred or secular, are examples from the brush of Armitage, Eyre Crowe, Pettie, and several noted artists, known to you by their reputé or works.

Such is a rapid glance of the names only of a very few leading painters of our day. Let me go back one hundred years or so, and recall the school of landscape painting at that time, for I would speak of landscape only at the present, and how it then found exponents in the great names of Gainsborough, Constable, Turner, and others. These artists came to Nature directly. No one will deny the truth and beauty of their work, specially in the delineation of thick glades, rolling skies of summer brightness, or storm clouds with their fine atmospheric effects. In all their pictures the claims of Nature are uppermost, and the influence of scenery very apparent. This brings me to a home subject—our climate and its surroundings as affecting English art. We have not the sunny effects of Italy or France, or the bright glow of an Eastern sky; but is there not beauty in this most uncertain climate of ours, and are not the effects, though transient, the more worthy to be transferred to canvas? and for all this we must go to Nature in her varying moods. The student will then see the artistic value of the mists, mists which have such glorious value in the low evening light. A cloudy day with pouring showers supplied Constable with his best subjects, and Turner's delicacy of atmosphere is well known to those who have only scanned his famous paintings.

Then each district of England has its own peculiar type of beauty. The wild sternness of the North, with its moors, wastes, and mountains so rich in subject; the hills and dales of Derbyshire and Yorkshire; the flat but not unpoetic fen lands of Eastern England, divided by dykes, fringed with reed grass and wild flowers, over which clouds loom in calm expanse, have given abundant themes for such artists as De Wint and others. For sea-coast our island has the wave-washed rocks of Cornwall and Devon, so often transferred to canvas by our best living painters; and to come quite home, the rich pastoral scenes of Surrey offer great attractions, and have produced a school of artists, among whom the name of Linnell, so honoured and known among you, will have a lasting and grateful claim.

You, inhabitants of this small but beautiful county, have in this and its western district large and varying opportunities for studying the rich aspects of Nature, be they wooded upland or hidden vale, the rugged common or the roadside village, with its church, mill, homestead, and trimly-thatched cottage. For your example and guidance are men who have studied, painted, and sketched in this very district, and whose names will be familiar to you as "household words." The late John Varley, one of the earliest of the school of water-colour painting, knew this locality well. Nowhere, perhaps, will the lover of colour find more scope for his brush, whether in oil or water colour. For are not the village homesteads and cottages a little picture jewel of themselves? The moss-grown roof, sprinkled with patches of stonecrop, or rich in purple clematis, afford a lesson and ready subject for colour treatment. Do not the narrow lanes, with their tangled hedgerows, and their bright golden-coloured banks, tempt the brush of the tyro to transfer these local tints to canvas? And are not the unsuccessful attempts to reproduce what is so rich and beautiful a great incentive to a closer study of Nature? Then if range of landscape is needed you have but to go farther westward, and a range of hills, of dusky paleness, with spring tints, or rich with purple heather, rising in crested beauty like waves of the sea, will give you all the effects of distance, atmosphere, and colour needed. I speak of that district round Haslemere, Hindhead, Lynchmere, Blackdown, where, as in a picture of this year's Academy Exhibition, the charms of this scenery is depicted in a painting, by that known artist Keeley Halswelle, called *A View over Three Counties*.

Surely then there is material at one's very door for subjects in oil, water, or pencil, and so you students of this art school and inhabitants of Surrey might strive to become like the Norwich school of painting, which was the leader of that time of a very recognised method of English landscape. The originators of this school were men of humble origin, who rise to fame through steady, patient study of nature, of course with much personal talent.

Here I may remark on the growing power of centralisation. Art students wish to get to London, and the great means of educa-

tion there. A very laudable wish, but may I remind them had they not also better strive and work to do honour to their local school of art, for by so doing they will identify themselves with local influences, and maintain that bond of union which was so great an element of success in the art guilds of old. The great Italian painters studied at and were called from their native towns; and surely with moderate success every student will in after life be proud to have been connected with and worked in a school identified with his birthplace and home life.

But we are not all painters, and there are other branches of art which develop our faculties and influence our daily life, and one of these is architecture. For this we have examples all around; the great English cathedrals, the ruined abbeys, picturesque by their age and situation, the market cross, and the humbler timber house afford every variety in construction and design. In our vast metropolis the examples are endless; the spires and towers of the City churches alone form a subject for the pencil, their graceful outlines framed by the genius of Wren, which is so stamped upon them; above all, the noble Cathedral of St. Paul's, a witness to the energy and perseverance which marked his career. After fifteen years of controversy, having made several designs, the king and the Government fixed on that now carried out, and it was with almost singular chance that the stone brought by a mason to form the centre stone of the dome had on it the word "Resurgam"—"I shall rise again."

The larger churches of our land are a valuable lesson to the architectural student. Each ecclesiastical district has its local interest; the noble towers of Somersetshire, the fen and marsh-land churches of Eastern England, the minsters of the centre, each and all supply varied characteristics to the intelligent sketcher and observer. The lesser village churches are also a storehouse of study. If near an abbey or convent, you may have in the carving, arches, or details the same master builder who guided the one and the other building to perfection. Even the encaustic tiles may assimilate in pattern; their history and architecture unite in their common aim of instruction. Let no one hastily pass by our village church, for of it the late eminent architect, Mr. Street, R.A., thus spoke:—"The small village church is the special glory of England, and nowhere will you find it in more primitive perfection than among the downs and woodlands of Sussex."

Not only will you find in church architecture that highest embodiment of the art, abundant sources of study and delight, be it in notes or the small sketch of some font, bracket, corbel, or foliage; but in mediæval architecture there is abundant wealth in our land. These houses are truly the early monuments of our country, the work of our forefathers, a work at its best during the reigns of the Tudor sovereigns; their mellow brick or stone contrasts most pleasingly with the verdant lawns or terraced woods around them, while many are noted for richness of ornament or minute detail. The chimneys were made a decorative feature—with moulded shafts, a carved cornice of terra-cotta is occasionally inserted; while the interior is replete with elaborate mantelpieces wrought in wood or plaster, staircases of rich oak, and ceilings with Tudoresque devices and panellings of the well-known "linen" or other pattern. For examples of these houses you have not far to seek even in this our small county. Sutton Place, near Guildford, is a typical and fine example, and embraces all the requirements of a mediæval mansion. Loseley, near Guildford, and more in the centre part of the county, the hall of Beddington, and the smaller moated grange of Crowhurst, near Godstone. From such houses many a lesson may be traced as to internal arrangements, planning, &c., and we see how the growing taste for adapting this style of architecture to everyday use has spread.

Here let me warn those who seek to adapt these structures not to be led into servile copyism, or to overload their designs with ornament, all which makes the modern imitation a vast sham. Rather seek to fathom in what consists the lines of simple artistic beauty in these houses—the fitness and charm of ancient art—and so by gaining the *spirit*, and not the letter, of their construction, they will serve as rightly as they are—the proud inheritance of our land and a special study for architects. On a much smaller scale, and somewhat reflecting the style and treatment of these mansions, are the homestead, and cottage, with its chimney stacks, porch, and thatched roof, on which luxuriate the lichen and moss, the whole a picture of English country life. Form, colour, and variety of subjects are here, and in the very villages around you have examples in plenty, which have been painted by our best artists. The cattle browsing on the common, the hill-side cottage, and the deep hedge-row recall scenes familiar to you by the brush of Birket Foster and others. So, I repeat, you have, both in your locality and in those artists who have made it a feature, great incentives to study.

**Erdington.**—The foundation-stone of the new chancel of the church of St. Barnabas has been laid. In planning the enlargement of the church north and south transepts are introduced, the body of the church being too wide for nave and aisles. The extension will provide increased accommodation for 360 persons, and the work is being executed by Mr. B. N. Smith, of Birmingham, from the plans of Mr. J. H. Chatwin, architect, also of Birmingham.



## NOTES AND COMMENTS.

THE report of the Norwich Diocesan Bellringers' Association calls attention to the great number of towers where the bells are either unringable or go very badly. It expresses a desire that the care which those in authority have been led to bestow of late years on the fabric of churches, with such beneficial results, could be extended to the towers, which are too often excluded. A visit of inspection now and then, a moderate amount of attention, and the judicious expenditure of a little money—possibly of a few shillings—might, according to the report, make many peals ringable for years to come, whilst many a belfry might be rescued from impending ruin.

THE extension works in connection with the French National Library are being actively pushed on, and at the same time a number of improvements are being made in the organisation and administration of the establishment. The electric light is to be used for part of the new wing now in course of erection in the Rues Vivienne and Colbert, so that the library may be used by students during the long winter evenings; the new light will first be tried in two small rooms on the ground-floor, and, should the experiment prove successful, will be gradually introduced throughout the building. Another improvement, and one which has become absolutely necessary, owing to the existing confusion in the classification of works, is about to be carried out in the compilation of a new catalogue on the double alphabetical system (1) by titles of the works, and (2) by author's names. This will be a boon to readers, who have now often to wait more than an hour before obtaining the work demanded of the librarian.

THE great work of surveying India continues, and the triangulation is expected to be completed by the end of 1882. According to the latest report the following work has been executed during the past year: 6,016 square miles surveyed on the  $\frac{1}{2}$ -inch scale; 6,610 on 1-inch; 16,073 on 2-inch; 76 on 4-inch. Five towns and three cantonments, of an aggregate area of 61 square miles, have been surveyed on various scales ranging from 6 to 24 inches to the mile. Village surveys on the 4-inch scale, and of hutted camps on the 12-inch scale, are also in progress. One important rule has been laid down by the Government in regard to river surveys that, "whenever a river happens to be under survey professionally, the operations, though they may be immediately required in connection with the settlement of a district on one bank of the river, are carried across to the opposite bank, and embrace the entire area between the permanent lines of village boundaries on both banks. The completion of the survey up to the permanent boundaries of the villages on either bank obviously possesses administrative value, and is likely to facilitate the more equitable adjudication of proprietary and tenant rights on the banks of rivers which shift and change their courses in the rainy season." In British Burmah nearly 2,000 square miles have been surveyed, and the natives of the country have been freely employed as field surveyors and draughtsmen, and have continued to give great satisfaction.

Two new galleries have lately been opened at the Conservatoire des Arts et Métiers, both of them situated in the left wing of the building looking on the interior garden. In the one on the ground-floor, to which has been given the name of Galerie des Constructions civiles, is a splendid collection of objects appertaining to the art of building; models and plans of timber and iron structures, mosaics, specimens of ceramics, instruments for descriptive geometry, &c. The other gallery, on the second floor, has been devoted to an exhibition of the arts of printing. It contains models of machines used in the manufacture of paper, besides printing machines and presses, photographic apparatus, appliances used in photo-engraving and phototyping.

AN archæological discovery of exceptional importance has just been made in France. According to a report drawn up by M. LISCH, Inspector of Historic Monuments, that gentleman, in his last tour of inspection, unearthed a Gallo-Roman city, near Poitiers. The remains include a temple of 70 mètres frontage and 114 mètres in length; a thermal establishment, covering about five acres, with its ponds, hot-air baths, water-courses, piping, pavements, &c., still existing; a theatre with a

stage 90 mètres wide, rows of seats, entrance lobbies, &c., intact; whole streets, houses, inns—covering in all upwards of eighteen acres of ground—in fact a small Pompeii in the heart of France. The excavations are not yet finished, but many sculptures of first-class execution and style, dated by M. LISCH from the second century, as well as an immense number of articles in iron, bronze, earth, &c., have already been found. M. MANTZ, the Director of Fine Arts, is naturally taking a great interest in the matter, and without doubt measures will speedily be taken to secure and preserve these important remains of old Roman Gaul.

M. FREMIET, the sculptor, has received a commission from the Municipal authorities for the execution of an equestrian statue of a herald bearing a cresset. The work is destined for the new Hôtel de Ville, and the artist will receive for it 24,000 fr.

It may be remembered that the Prix du Salon in sculpture was awarded to M. LONGPIED for his fine marble statue of a *Fisherman bringing Orpheus' Head to Land*. According to the regulations the age of competitors for the Prix must not exceed 32 years, and one of M. LONGPIED's rivals protested against the award on the ground that at the time of the Exhibition the prize winner exceeded his 32nd year by several months. On inquiry being made, the assertion was corroborated, and M. LONGPIED at once admitted the fact. The Prix had to be withdrawn from him, and cannot now be adjudged during the present year.

THE new arrangements of the Institute of Painters in Water-Colours almost amount to a revolution. Henceforth it will not be necessary to be a member in order to have a drawing hung on the walls at the exhibitions. Works may be sent in without restriction, and those which can sustain the scrutiny of a committee will be accepted. In other words, the Institute will resemble the Royal Academy. The alteration will hardly be accepted without a protest. The annual exhibitions will be said to lose the character which for many people formed the chief attraction at Pall Mall. But more vigour and variety may be anticipated. It may also be mentioned that the Princess BEATRICE has been elected an honorary member of the Institute.

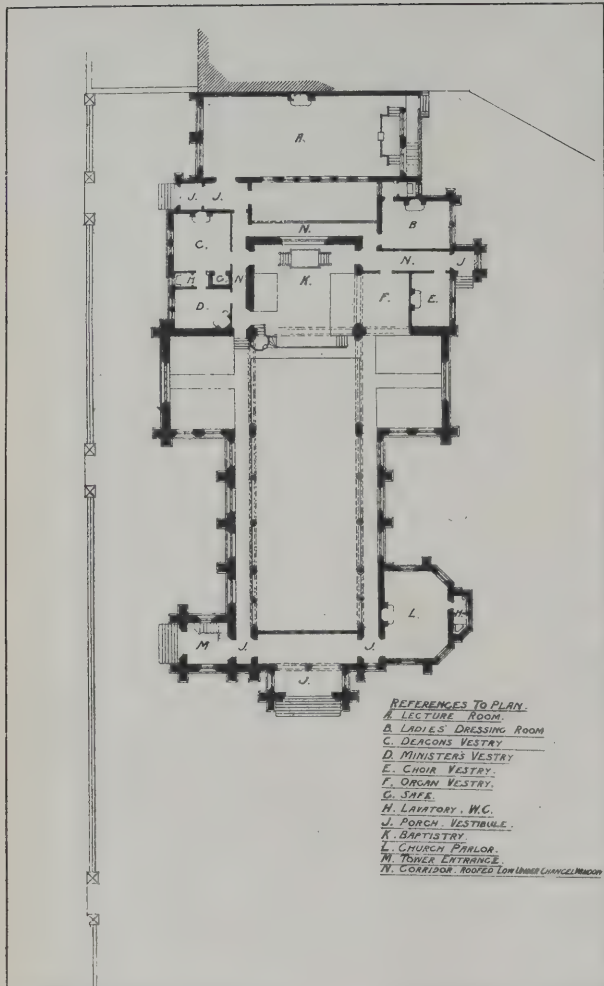
A NEW gallery of contemporary furniture has been added to the Exhibition of Decorative Art, now open at the Palais de l'Industrie, Paris. It contains the chief articles of furniture, upholstery, &c., that have taken prizes at the various exhibitions held in France and abroad during the past twenty-five years. The exhibits are necessarily of the most varied kind, and include many articles that, from the artistic design and wonderful finish of their execution, ought rather to be ranked as works of art than of furniture. The new gallery is situate on the first floor, to the left of the President's Salon, and is an important acquisition to the Exhibition, which is now one of the most attractive sights of the French capital.

No ruin in Scotland has been more often painted than Kilchurn Castle on Loch Awe, which, with its surroundings, forms a picture that needs no idealisation. But unless precautions are taken the castle will no longer be available as a subject for the artist. According to a letter in the *Times*, it is becoming a mere heap of stones. The mischief began early in the present century, when the building was unroofed for the purpose of utilising the timber in the construction of two modern dwelling-houses—it is fair to add, in the absence of the then earl, and without his permission. But the wood so abstracted does not seem to have been restored, and neglect must have been continuous, for at this moment nobody, except the cattle who creep in there for shelter, can walk about the interior, which is choked with fallen stones and towers, large portions of which, with the staircase, have tumbled down within the last few months. Other portions of the walls will certainly give way before the next high winds, and the trees and ivy, which have attained a rank luxuriance, must aid in precipitating the catastrophe. It is stated that last year something was done to the masonry, and that a few of the cracks were cemented over, but the interference must either have been trifling or ill-judged, as the recent mischief shows. Kilchurn Castle was one of the strongholds of the Campbells, and it has acquired sufficient interest to ensure that funds could easily be raised for its preservation.









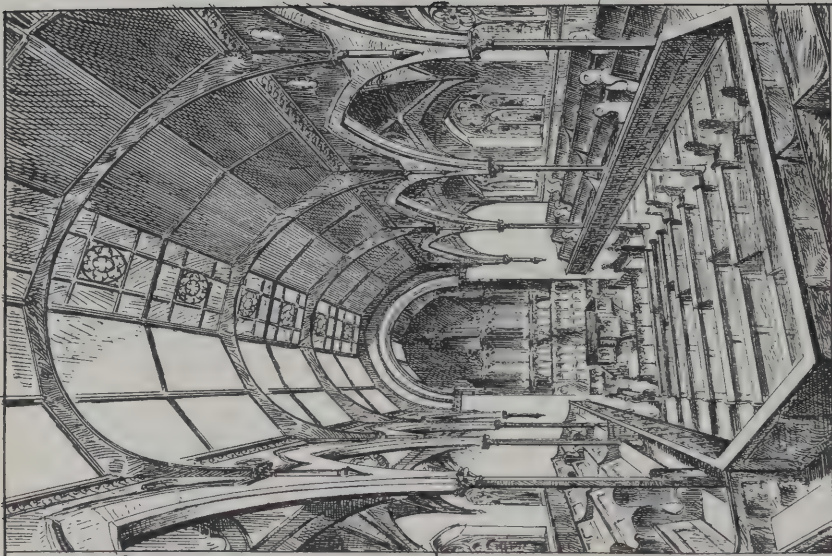
NEW BAPTIST CHAPEL, MOSELEY, BIRMINGHAM. JOHN P. OSBORNE, A.R.I.B.A. ARCHT. 95 COLMORE ROW BIRMINGHAM.

Spalding & Co. 22, Mark Lane. Crown St. E.C.

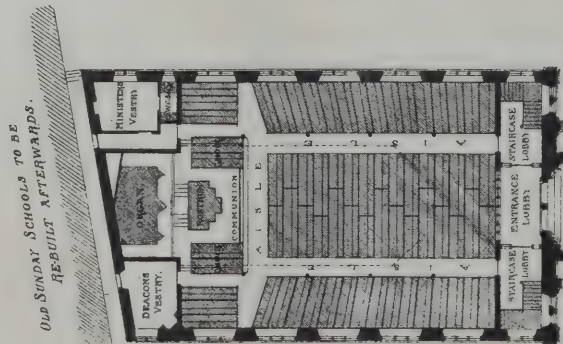
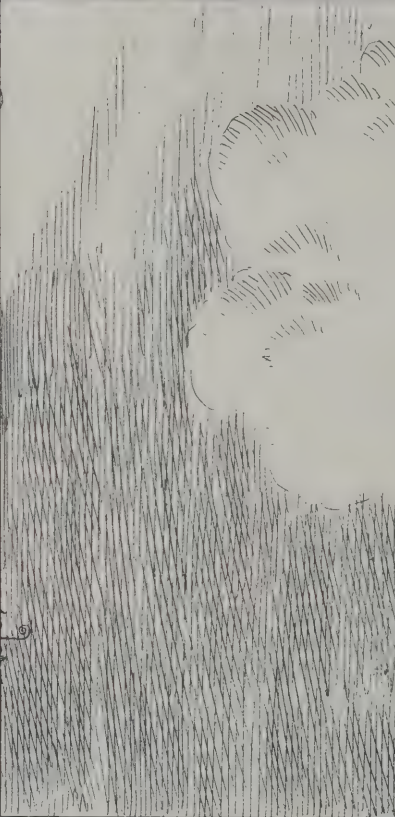






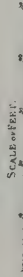


# Church of St. Clement and St. Dennis



OLD SUNDAY SCHOOLS TO BE  
 REBUILT AFTERWARDS.

BLOCK PLAN.



WALTER HANSTOCK A.R.I.B.A. ARCHITECT.







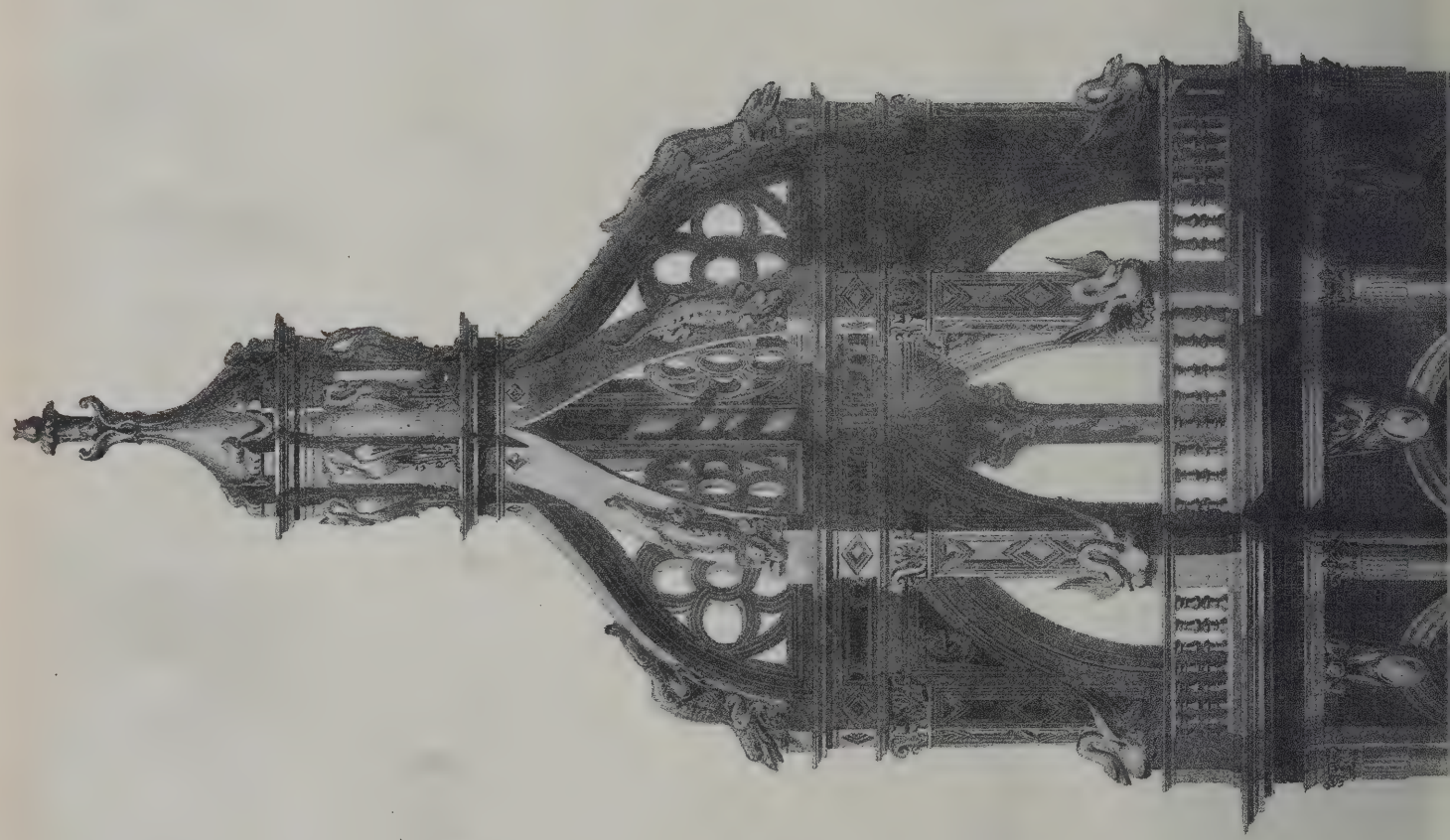




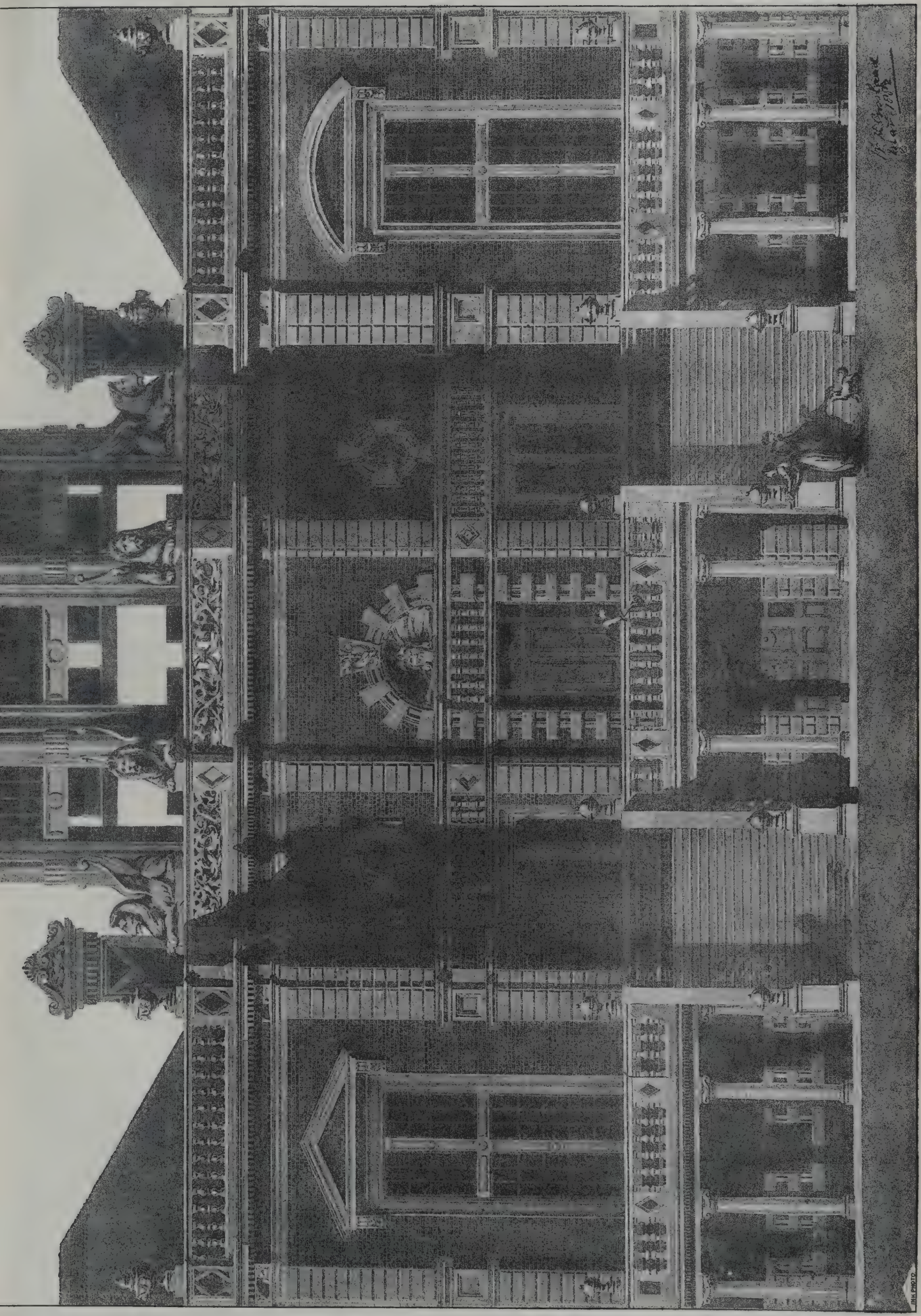












CENTRAL TOWER, HOLLOWAY COLLEGE, EGHAM.  
W. H. CROSSLAND, ARCHT.

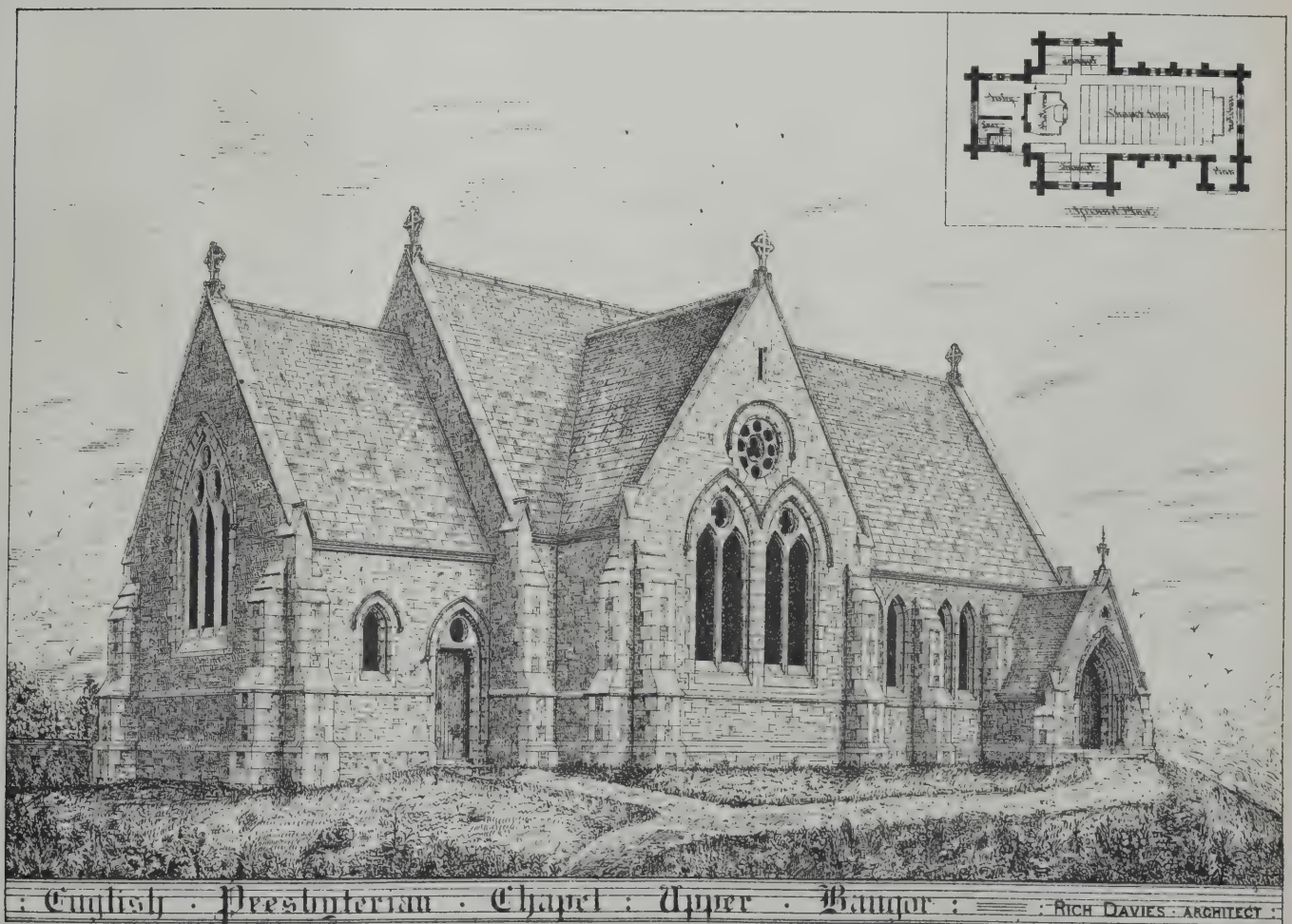








MISSION HALL, CARLISLE.  
G.D. OLIVER, ARCHT



: English · Presbyterian · Chapel · Bangor : RICH DAVIES · ARCHT







## ILLUSTRATIONS.

HOLLOWAY COLLEGE, MOUNT LEE, EGHAM, SURREY.

OUR illustration is of the tower which stands in the centre of the two quadrangles of this building, which is now approaching completion so far as the main building is concerned, under the direction of the architect, Mr. W. H. CROSSLAND. The lower floor of this tower will be used for a heating chamber, the main floor as a central hall, having the dining-hall on one side and the kitchen and school of cookery opposite. This hall has a vaulted ceiling supported on detached columns. The upper chamber will be furnished with slate cisterns, which will serve the low-pressure water service.

Mr. FUCIGNA is the sculptor engaged, and Mr. JOHN THOMPSON, of Peterborough, is the contractor.

The illustration is a reproduction by the ink-photo process of a large drawing which was exhibited this year at the Royal Academy.

EBENEZER CHAPEL, DEWSBURY.

THE corner-stone of this building was laid on Tuesday in last week by Mr. E. CROSSLAY, of Halifax, when Mr. W. HANSTOCK, A.R.I.B.A., of Batley, the architect, gave a description of the building. The old chapel was 79 feet long and 49 feet wide externally. The new building will be 87 feet long and 54 feet wide. The plan of the chapel is a simple oblong, without any projections in the shape of transepts, &c., whatever. The entrance is in the centre of the front gable, consisting of two doors 4 feet wide, each opening into a corridor 8 feet wide; the corridors are divided with swing doors so arranged that all persons must pass through three swing doors before entering the chapel proper. The internal dimensions of the chapel are 69 feet long and 47 feet 6 inches wide, exclusive of organ chamber. There will be two aisles in body of chapel, the seats in centre being straight and those at the sides splayed. The organ chamber is recessed from centre of end of chapel, and is 20 feet wide and 13 feet deep, the ground floor vestries being on each side of organ chamber. The rostrum pulpit is directly in the centre of the organ chamber, and the choir stalls are treated in an original manner for chapel work by placing them on each side the rostrum, and forming the sides of communion, so that they will sit face to face, similar to the choir stalls in the chancel of a church. Galleries will continue along each side of the chapel quite straight, and the gallery over entrances will be much deeper for children's seats. The chapel floor falls from front entrance to rostrum slightly. The roof is all in one span, but divided internally into nave and side aisles, and the clerestory arches are supported by ornamental cast-iron columns. The height from floor-level to eaves of roof is 27 feet, and from floor-level to apex of roof 51 feet. The style of architecture adopted throughout is Decorated Gothic of the thirteenth century, and, as the photo-lithographic views will show, the treatment is anything but of a plain character. The whole of the front gable is out of the best white Holmfirth ashlar, and wallstones clean boasted. The slating will be the best Westmoreland with dressed stone ridges. The woodwork throughout will be of the best quality of pitch-pine, which is intended to be varnished. The accommodation in all is for 836 persons, allowing 20 inches for each in length, being 436 in the body of the chapel and 400 in the galleries. The contractor is Mr. T. H. THORP, of Leeds.

MOSELEY BAPTIST CHAPEL.

THIS illustration is reproduced from a competition drawing by Mr. JOHN P. OSBORNE, A.R.I.B.A. The chapel accommodates 784 persons, 656 of whom are on the floor, the remainder being in a small gallery at the back of chapel and over entrance. The lecture-room seats 253 persons, and is provided with suitable retiring or cutting-up rooms, which are placed underneath. The cost of the whole of the buildings is estimated at 5,750*l*.

MISSION HALL, CARLISLE.

THE Mission Hall which is the subject of one of our illustrations this week is now nearly completed, and will shortly be opened by the Lord Bishop of the diocese.

It is built, in connection with the parish of St. Paul, on a site generously given by the Duke of DEVONSHIRE, and is situated at the corner of Compton Street and Swift's Row, with entrances from both streets.

The building is designed in an Early Gothic style of unpretentious character, and is built of pressed brick with stone

dressings sparingly introduced. Internally the room has a homely appearance, and is well lighted and ventilated. The roof is partially open, the pitch-pine timbers (which are exposed) dividing the ceiling into panels. The hall will accommodate nearly 300 worshippers. The heating is by hot water, so arranged that the hall and class-room may be warmed separately or together. In the execution of the work the design has been altered by the addition of a stone belfry to the principal gable, not shown in the view.

The cost of the building, exclusive of fittings, will be upwards of 900*l*. The contract is being well carried out by Mr. GEO. BLACK, under the superintendence of the architect, Mr. GEO. D. OLIVER, of Carlisle and Workington.

ENGLISH PRESBYTERIAN CHAPEL (CALVINISTIC METHODISTS), BANGOR, NORTH WALES.

THIS chapel has lately been opened; it is erected on an eminence near the Normal College, facing the Menai Straits. It has a nave, north and south transepts; the chancel is divided from the chapel with a partition wall up to the roof; the bottom floor of the chancel is used for a vestry; there is another floor level with the sill of the east window, and the room formed thereby is for Sunday school. The materials for the outside are granite from Newry, in shoddy work, and the dressings of lime stone from Anglesey. It is plastered inside and ceiled at the collar. The vestibule is divided from the nave with a glazed screen. The chapel seats about 260. The cost was 2,000*l*. The contractor was Mr. EVAN WILLIAMS, Bangor, and the architect Mr. RICHARD DAVIES, Bangor.

## THE SANITARY CONGRESS.

THE annual meeting of the Sanitary Institute was held last week in Newcastle-on-Tyne, under the presidency of Captain Douglas Galton, R.E. The following are abstracts of some of the papers which were read:—

## Sanitation in relation to Building.

An address in the section of Engineering and Architecture was delivered by Professor Henry Robinson, C.E. He said it is no exaggeration to state that not one quarter of the dwellings of all classes, high or low, rich or poor, are free from dangers to health due to defects with respect to drainage, water, or ventilation which were capable of being easily avoided at the outset. The public are now more alive than they were to the necessity for inquiry into these matters, and consequently sanitary authorities (who cannot go much ahead of public opinion) are better able to enforce regulations, and are more willing to bear the expense of doing so. To ensure healthy homes local authorities should have bylaws requiring compliance with general rules, which are now well known and hardly require to be specified. It is obvious that the condition of the drains, soil pipes, ventilation, &c., of the old houses should also be the subject of investigation. But it is not till the attention of the medical officer of health is arrested by the occurrence of fever, or other form of illness, that their condition is inquired into at all, although they might have been in so insanitary a state as to be unfit for habitation. The conversion of unhealthy old dwellings (which form so large a proportion of the houses in large towns in this country) into healthy ones, is a task which without reference to bylaws presents no attractions from an architectural point of view, but has nevertheless to be undertaken by those who are best fitted from their position and influence to deal with the subject. These observations apply with the greatest force to the houses of the poorer classes, who have not the opportunities of exercising any critical supervision of their own. As regards the houses of the better classes, the same remarks apply to an extent greater than should be the case, considering the irretrievable mischief consequent on treating these matters apathetically. In order to arrest attention to the condition of houses, and to expose their unhealthy state, the following plan is suggested:—It should be compulsory on the part of medical men, or of the occupier, after notification by the medical man, to return to the officer of health for the district any case of illness of the classes agreed on as arising from sewer gas, infected water, and the like. This notice should be accompanied by particulars of the house in which the illness occurred, and whether it was an imported case or originated in the house. It should then be the duty of the sanitary authority to have affixed to a plan of the district a coloured wafer or dot corresponding with each disease. This plan should be open to public inspection, as well as any reports explanatory of each case. The effect of this would be that a house, or group of houses, in which those diseases occurred would be revealed at once to the eye of an intending occupier by the array of wafers, warning the unwary against the danger they are running. On the efficient way in which the plumbing and sanitary work in a house is executed depends, to a large extent, whether a house is healthy or not. Experience proves continually that much of this work is done by incompetent or



careless people, and requires subsequent rectification, probably after illness has caused an investigation to be made. In America legislation has aimed at correcting this evil by making it a penal offence for plumbing work to be badly carried out. He contended that an intending purchaser or occupier of a house should require a certificate that certain stipulated conditions have been fulfilled. This would render it necessary for the landlord or vendor to ascertain (what is only equitable that he should) that the house is fit for habitation before he derives any benefit from his property in it. Similar certificates should be required for all new houses, and no one should be allowed to let or sell a new house until the local authority had given a certificate. This would involve more inspection and a larger staff than now exists, but the cost of this might fairly be borne chiefly by the builders, who should pay according to a sliding scale. The cost should not fall wholly on the rates. This plan is now in successful operation in several towns, and heavy penalties are imposed where a house is allowed to be inhabited without a certificate. The cost of the increased staff no doubt will be thought an objection were it to be charged on the rates, especially in a town where, as frequently happens, the members of the governing body for the time being prefer a low rate to such safeguards as those indicated. Further legislation on certain matters is necessary to meet altered circumstances, or to enable the experience which has been gained to be put into operation. The arrangement of sanitary districts, according to the old Poor Law divisions, requires modification. The distinction between urban and rural districts in regard to the power to make bylaws regulating buildings and streets or roads is anomalous, inasmuch as many districts that were rural at the time the Public Health Act was passed have so changed by the increase in population, and its congregation in large groups, as to have become urban in parts of it, and to require the same bylaws as urban authorities have. According, however, to existing legislation, there is no power on the part of rural authorities to make bylaws regulating buildings, streets, or roads, even where the conditions of population are similar to those which obtain in urban districts. Manufactories in some cases have been erected outside urban districts in order to avoid the borough and general rates. These works lead to houses being built around them, without, however, being under sanitary supervision. It is desirable that a heavy penalty should be imposed by law where a house was let or sold when in an insanitary condition. Parliament has made it an offence to sell food which is unfit for consumption and a danger to health. It should be made an offence to sell or let a house which is equally a danger to health. What is required is that existing anomalies and ambiguities in legislation be removed, that compulsory powers should be substituted for permissive in every matter connected with the department of health, that a central local authority should have power to deal with matters concerning the group of local authorities in its county, and (as has been often urged) that a department of health, with a permanent chief, might be created. The training of those who are appointed to positions such as surveyors to Local Boards and inspectors of nuisances, requires careful attention. Their duties are important ones, and good or bad results follow the efficient or inefficient discharge of them. Men filling positions of this kind ought to be required to comply with some test, or to pass some examination. They should also be more independent than they are of the influence of members of the authority whom they have to serve, and this can only be effected by making their appointment incapable of being cancelled without the consent of the higher authorities. On the conscientious and efficient discharge of their duty by those who have to carry out sanitary work, depends the health and welfare of the community, and a negligent or incompetent person can produce enormous mischief. This responsibility, whilst entailing a corresponding anxiety to those engaged, is accompanied by the knowledge that their work is one which, if well done, results in diminishing the death-rate and improving the health of those in whose midst they are called upon to devote their energies.

Captain Galton proposed a vote of thanks to Professor Robinson for his address. He said he had long felt that they had solved many problems which related to the larger questions of sanitation, but there remained very much to be done in the sanitation of houses. No doubt the Artisans and Labourers' Dwellings Act enabled the worst tenements to be pulled down, but there were an immense number of houses which could not be touched under that Act. Of course it was very difficult to interfere in every individual house, but he had always thought if new houses, both in town and country, were subject to the approval of some local authority, so that no new houses should be built unless they fulfilled certain sanitary requirements, they would make a very rapid increase in providing healthy dwellings.

Mr. E. C. Robins seconded the motion, which was agreed to.

#### Scullery Sinks.

Mr. W. Eassie, C.E., read a paper on "The desirability or otherwise of providing town and country houses with grease-intercepting chambers to scullery sinks." He said that there was a difference of opinion on the subject. Some tried to wash away the grease by a plethora of hot water, and in a small house inhabited

by a limited number of persons, such might answer; but it was not necessarily to be supposed that because it would do with a small house, it would also do in the case of a large residence, with ten or a dozen of a family and a number of servants, or in any large establishment, where it might be expected a large amount of grease would find its way into the drain-pipes. He did not think that in the case of a large establishment any amount of flushing power would scour the grease from the drain. The sand used for household purposes found its way to the drain-pipe, and its progress was arrested by the grease adhering to the sides, resulting ultimately in the stoppage of the pipe. Surely then some provision should be made for grease interception. Having described the class of grease trap which he thought would best answer the purpose, he said that it was only begging the question to say that the grease traps was the old cesspool system renewed. That could not be so, because nothing but the fat could enter the grease trap. Provided trap were cleaned out regularly, they would prove sanitariously beneficial.

The President moved a vote of thanks to Mr. Eassie for his excellent paper.

Mr. R. B. Grantham seconded the motion.

Mr. H. S. Snell said he thought that by the best constructed traps devised only a small proportion of the fat passing through the sink was effectually caught.

Mr. E. C. Robins described practical experiments on the subject carried out in his own house. The trap he had used did catch the fat, and to his mind it only remained a question which was the best—a large trap requiring cleaning out once in three months or a small one to be cleaned out by the servants of the house every day. In the latter case the accumulation of fat could be removed by the servants of the house with a spoon without inconvenience from offensive effluvia.

Mr. H. Laws said the result of his experience in connection with the grease trap at his house pointed to the fact that the apparatus shown failed to act in a measure because it was confined in its space and there was a want of ventilation to it.

Mr. Eassie: There is a ventilating pipe in each case.

Mr. Laws meant to say they should be entirely open to the air. It was clear that these traps should be kept clean in order to prevent rats coming to them.

After remarks from other gentlemen, Mr. Eassie replied, and said it must be taken for granted that the grease traps were always ventilated.

#### Sewer Gas.

Mr. E. C. Robins, F.S.A., read a paper "On the original experiments of Dr. Renk, of Munich, with sewer gas, and the mode of its exclusion from dwelling-houses." He said Dr. Renk opened his paper with an explanation of the term sewer gas, and gave a *résumé* of the experiments which have been made in the composition of sewer gas, and the amount of gas given off by the decomposition of excrementitious matter. He admitted the presence of solid particles, bacteria, &c., but expressed himself a disbeliever in the so-called sewer gas theory; that was to say, while he believed that inhaling sewer gas was prejudicial to the nervous system, and was one of the many causes of the impurification of the air we breathe, he did not consider it provocative of specific forms of disease, and he questioned the possibility of solid and liquid particles passing from sewage into the superincumbent air. Mr. Robins then went on to show by means of diagrams Dr. Renk's view of the causes which lead to the escape of sewer gas, and also the syphon traps which he thinks are best fitted to resist the pressure of sewer gas.

Professor de Chaumont said the German, and especially the Munich School, had a theory of their own, to which they stuck through thick and thin. They considered the question of sewer gas as a mere subsidiary one.

Mr. Alcock said he had hoped to have heard of some means of intercepting sewage gas before it entered houses. He described an intercepting manhole used in London, which he had adopted in connection with his own house, and found it valuable. The drain itself was open to the manhole, which was kept continually sweet and well ventilated by means of a pipe; and this enabled them to test each house drain and see whether it was working efficiently.

Mr. Grantham explained that at Slough sewers were now ventilated by means of pipes carried up inside the gas-lamps, and said this system had proved so efficacious that the gratings had been covered over with zinc plating.

#### Sewer Ventilation.

A paper on "Sewer Ventilation" was read by Mr. W. G. Laws, Borough Engineer of Newcastle. Sanitary engineers have, he said, long recognised the fact that no water-trap is secure against occasional pressure of gas in the sewers and drains, which must, and does, more or less effectually break the water seal and allow the gas to pass into the house. They have, therefore, very generally adopted the plan of carrying an open-ended ventilating pipe from the soil pipe at least up to the eaves. This effectually prevents pressure on the closet or sink traps, and is a most commendable arrangement. Architects, however, are very naturally averse to disfiguring their elevation by an unsightly pipe, and the result frequently is that this safety valve of the drains is rendered



worse than useless by being terminated at, or even below the eaves. Few but can call to mind some instance of an open soil-pipe ventilator, ending with a handsome cap, within a few feet of a bedroom window, into which, if open, the gas must be blown in at least one direction of the wind. This open-ended soil pipe is, however, the true germ of efficient and safe ventilation, not only of the house drains, but of the sewers. All that is necessary is that it should be connected directly with the drain or sewer, without a trap, and that it should be carried to the highest point of the building, above all windows and openings. This would be effected by forming the soil pipe of well-glazed sanitary pipes, such as are now used for the best chimneys, and building it into the chimney stack—making, in fact, a separate gas chimney—through which all noxious gases from either drains or sewers could freely escape. This “gas chimney” should preferably be laid alongside or between the kitchen chimneys, the heat of which being partly communicated to the gas would assist in securing an upward draught in all seasons. The sewer would be delivered among the freshly-made and finely-divided carbon of the smoke from the kitchen fires—a most powerful deodoriser and disinfectant—and it would be delivered far above all occupants of the houses or passengers in the streets, securing, at least, that before it reached them it must be very largely diluted, and so rendered less harmful. It has frequently been proposed to ventilate the sewers by erecting tall chimneys, with a furnace to create a draught, and connecting them with the drains. This seems feasible at first, but has one fatal objection. The sewerage of a large town may be compared to the “arterial” system of the body—the flow of gas is naturally towards the capillaries (the house drains); and to render the furnaces effective it would be necessary either to erect the shafts over the main drains in the lower parts of the town near the outfalls, and so reverse the natural course of the gas and make it flow in the same direction as the sewerage; or to add a “venous” system to collect the gas from the house drains into larger “veins” upon which the furnaces could be placed; or otherwise to place a furnace shaft at the end of each house drain. This latter is practically the system proposed by the writer, as every house drain would terminate in a warmed ventilating shaft, while openings would be provided in the lower parts of the town on the main sewers to allow of the entrance of fresh air. It is a system that could be readily and economically carried out in all towns which have the power of making building regulations. All builders of new houses might be compelled to provide the additional “gas chimney,” and the cost would be so small (about 50s. in an average three-story house) as to create no opposition among the builders, while architects would not object to a plan which makes no unsightly blot on their elevations. Among houses already built, its introduction would be of course slower and more costly, but even there the constant pulling down and rebuilding going on in the heart of large towns would soon secure a sufficient number of ventilators in each street—a dozen gas chimneys, for instance, would amply ventilate a 3-feet by 2-feet main sewer.

Professor Robinson said he did not approve of the principle of ventilating sewers recommended by Mr. Laws, and contended that foul gas could be avoided if care and skill were exercised, but if gas did exist in sewers, it would be better to get rid of it in the open air than by running the risk of introducing it into houses.

Mr. Alcock said he would be sorry if the system advocated by Mr. Laws was adopted. His experience of builders was that they would be almost certain to carry out Mr. Laws’ system in such a way as to make it a means of bringing gas into buildings. Openings from the sewers into streets were exceedingly desirable; the moment anything went wrong in a sewer, the stench from the grating caused it to be observed, and the sanitary authorities could put the evil right.

Mr. J. Lemon urged the importance of sewers being kept clear of the ventilation of house drains; both should be ventilated and should not be mixed together. He thought the objections to open gratings in streets were very much misunderstood and overrated. When there was a smell from an open grating it was the duty of the authorities to investigate the cause of it.

Mr. H. Laws considered that an absolutely open ditch, with a smooth channel, was the best means of getting rid of sewage matter by water carriage. He advocated openings wherever they could get them. He preferred smells coming out into the streets to smells going into houses. He agreed with the writer of the paper that the more openings there were the better.

Mr. T. P. Barkas explained the practical difficulties connected with ventilating sewers by means of large furnaces. If sewer gas was taken up pipes alongside of a house chimney, it would not only be diffused into the air, but would also get up into the upper bedrooms. It was of the greatest importance that all noxious gases should be kept as far as possible from houses. He was not quite sure whether the best plan was not to approach to the system of open draining, which was practically this—to have a very large number of openings in the middle of main streets for the escape of effluvia, and to diffuse the gaseous matters to make them practically harmless. He would be very sorry to dogmatise as to the best mode of ventilating sewers; but he was rather disposed to think that the mode recommended in the paper was very nearly one of the worst.

Professor Chaumont thought the system of having shafts and furnaces for ventilating sewers had been long ago exploded.

Mr. E. C. Robins contended that if sewers were ventilated by means of pipes in chimneys, there would be a risk of gases being introduced into houses.

Mr. H. E. Armstrong said he had at first differed from the views of the author of the paper, but he had thought the matter carefully over in the last few months. He had had some painful experience of infection caught by children playing over street grates, and had come to the conclusion that it would be much better to deliver sewer air at a greater height from the ground, so that it might have a fair chance of being diluted. The chance of sewer gas being carried down chimneys was not great. He thought advocating open sewers was a retrograde proposal.

Mr. D. Balfour said the confinement or concentration of the contents of sewers was the cause of complaints. Where there was free ventilation there was little fear of gas.

Captain Galton said he had always strongly held the opinion that it was undesirable to use house drains as a means of ventilating town sewers, and advocated having a trap between a house drain and a sewer.

Mr. G. W. Laws, in replying, said that where the system of ventilation advocated by him had been tried it had proved a perfect success.

#### Elevated Houses.

A paper on “The Improvement of Climate with Slight Elevation” was read by the Hon. F. A. Rollo Russell, in the author’s absence. It stated that repeated observation had proved that at points artificially or naturally raised above the surrounding district the range of temperature was smaller. The practical conclusions seemed to be that invalids and delicate persons would generally be best placed in high-sheltered situations, in the highest rooms of a house, and by no means on a ground floor; that a climate resembling that of the seaside, but less damp, could be obtained by living at the top of a high house; that every house ought to be built on arches, or thoroughly ventilated below and raised on piers above the ground level, and that no house or cottage which is not ventilated underneath, with damp-proof walls, should be considered habitable; and that in the country no house should be considered habitable of which the floor is on a level with or below the ground.

#### HOSPITAL CONSTRUCTION.

THE Sanitary Act of 1866 conferred upon local authorities the power of erecting and maintaining isolation hospitals for cases of infectious disease, and similar powers were given to both urban and rural sanitary authorities by the Public Health Act of 1875. From a return made to the Local Government Board in 1879, it was found that 296 authorities had made arrangements for dealing with such cases, and although in some places they were insufficient, in others excellent fever and smallpox hospitals had been provided. In consequence of the difficulties which arose from want of experience and from prejudice, the Local Government Board found it necessary to obtain accurate information about those hospitals, and Dr. Thorne Thorne was instructed to make inquiries into the conditions by which the greatest usefulness was attained. He inspected 67 hospitals of every variety of size and construction in England and Wales, and in the following report Dr. Thorne has summarised in a compendious form the lessons which have been learnt during his lengthened investigation:—

Where the shape of a site and the necessary conditions attending the arrangement of the buildings have permitted of choice, it has under most circumstances been found desirable that the opposite side windows of the ward-pavilions should as nearly as possible respectively face somewhat to the south of east and to the north of west, and that any departure from this rule should be in the direction of a south-easterly and north-westerly aspect, rather than in that of a south-westerly and north-easterly. By this means both of the side walls of the hospital wards are in turn brought under the influence of the sun’s rays, a large amount of daylight is secured, the spaces between any two or more parallel pavilions become well warmed and lighted, and, at the same time, direct exposure to the east wind is avoided.

The necessity of having every site so effectually enclosed as to prevent any communication between persons in the hospital and those outside is obvious, and a spread of infection to the outside public was in several instances ascertained to have been due to the imperfect manner in which this had been carried out. As a rule, a substantial wall or close fence at least 6 feet 6 inches high is found necessary for this purpose.

The more efficient hospitals for infectious diseases, which have been provided by sanitary authorities in order to meet the wants of their districts, have under ordinary circumstances consisted of (1) an administrative block; (2) at least four wards, in two separate pairs, and in which patients of both sexes, suffering from two different infectious fevers, can be simultaneously treated; and (3) certain out-buildings, such as washhouse, mortuary, &c. These buildings have been either permanent or temporary. As regards permanent buildings attention to the following points has been found necessary.



The administrative block is nearly always so constructed that the offices and apartments it contains are in excess of the requirements of the permanent ward buildings, and are hence adapted, without having recourse to further erections, to the wants of such permanent or temporary extensions as may at any future date become necessary. Having regard to economy of space, it has as a rule consisted of more than one storey; and in its general construction the rules and regulations governing the erection of good modern dwelling-houses have been observed. The accommodation it affords must necessarily vary very much according to circumstances, but as a rule it has been found to contain adequate accommodation for a caretaker and his wife, or for a matron when a porter or other male servant is maintained on the premises; a kitchen, together with scullery, larder, pantry, &c., so fitted as to serve the requirements of all the hospital inmates; sleeping accommodation for nurses and staff, that for nurses being, in most cases, on an upper floor, where those who are at work at night may rest by day without being disturbed; a medical officer's room and dispensary; bath-room, and closets for the staff, &c. In larger hospitals it is also found necessary to make provision for the accommodation of a resident medical officer, and to provide a mess-room for the nurses and staff. The administrative block is always either completely detached from the ward buildings or it communicates with them by means of a passage, either in part or in whole open at the sides, so that a cross-current of air may pass between the respective buildings. It is also, as a rule, so placed with regard to the entrance to the hospital premises that visitors or other persons can enter it without passing the buildings containing the wards.

The ward buildings which have been met with in so-called permanent hospitals have been constructed either of brick, stone, or concrete, alone or in combination, or of corrugated iron, or again of wood. By far the majority have consisted of brick, with stone or glazed coloured brick ornamentation; some, as at Bradford, are throughout of stone, lined with brickwork; and in one instance—namely, in the Weymouth port district—very excellent results have followed the use of concrete. Corrugated iron is not in frequent use; it has generally been resorted to when an effort has been made to cope with a threatened or an existing epidemic; the buildings have been hurriedly erected and the result has not been satisfactory. Even when the iron has throughout been lined with match-boarding, it has often been found impossible to keep the wards sufficiently warm in winter, or sufficiently cool in summer, and it has in some instances been deemed risky to use them at all during the colder season of the year. One of the better examples of iron buildings which were met with is that at Southport, but there was no available information as to the temperature at which its wards could be maintained in winter.

Of the wooden ones much the same may, as a rule, be said. Nearly all have been erected under the influence of panic, and hence they have generally been very imperfect in point of construction. But even where the walls, as also the wooden or tiled roofs, have been well lined with match-boarding, a space of some 5 or 6 inches, either filled in with sawdust or not, thus intervening between the outer and inner layer, it has during the winters of 1879-80 and 1880-81 been, as a rule, found impossible at all times to maintain within them a sufficiently equable or sufficiently warm temperature, even when the fireplaces were good as regards both construction and position, and when the window surface and the means of ventilation into the outer air have been by no means excessive.

At Nottingham, where the two layers of wood forming the walls are 6 inches apart, the interspace being filled in with sawdust, it was on one occasion found impossible, even when large fires were maintained night and day, to raise the temperature near some of the beds beyond 32° Fahr.; in the Alcester rural district, where there is a very similar building, the temperature was found in the winter of 1880-81, and under the same conditions, to fall to 38° Fahr.; in several such hospitals I heard of water freezing near the beds of patients; some are designedly not used in winter weather; and in one instance one of the more substantially constructed wooden buildings was closed during a recent winter because it was believed that the death of two patients had been brought about by the low temperature which it had been found impossible to obviate. In some of the more solid wooden constructions, as at Birmingham and Oldham, so low a temperature has evidently been avoided, but in neither of these districts was I able to procure thermometric observations as to ward temperature. Having reference, however, to the experience which has been acquired, I cannot but conclude that, as regards permanent hospitals in this climate, wooden and iron buildings as ordinarily constructed are not, as a rule, well adapted to the purposes of wards. That they can be constructed so as to ensure a reasonable and a fairly equable ward temperature I do not doubt, but when so constructed, their original cost would probably not fall short of, if it did not indeed exceed, that incurred in the erection of ordinary brick buildings; they would be less durable than these, and the cost of maintaining them in a proper state of repair is undoubtedly greater than that needed for the maintenance of the more substantial structures.

Having regard to the desirability of securing surfaces which are easily kept free from dirt and infection, and which dry rapidly

after being cleansed, it has appeared to me that wooden-lined wards are not adapted to the varying needs of a permanent building, especially in cases where the several sets of wards cannot always be reserved for the same diseases. On the other hand, no information has been forthcoming during the course of my inquiry tending to show that wards composed of the more permanent materials, but which are well constructed, well ventilated, and well administered, became in process of time less fitted for the reception of the sick than they were when first erected.

By far the majority of hospitals visited had all their ward accommodation on the ground floor, an arrangement clearly the most convenient for administrative purposes and also possessing other advantages. Where, however, a site was necessarily limited, there was advantage in the hospital buildings being of two storeys and having a belt of unoccupied land around them, in place of being of one storey only and covering the site up to, or nearly up to, the limit of the ground. The former plan allowed of something in the shape of airing grounds being provided, besides favouring such reasonable distance between the hospital and neighbouring roads and houses as is desirable for the purpose of giving confidence to the public and of reducing any real risk there may be from the proximity to hospital. Where these conditions have been complied with and where the wards on both floors, as also the buildings generally, were well ventilated and well administered, I was not able to learn of any experience tending to show that such an arrangement had in any way acted prejudicially.

Instances were, however, met with which tended to show that in the interests of the patients themselves, and this even where a site was properly chosen, any such overcrowding of buildings, or of patients, on site, as could either hinder, or interfere with the purity of, the air entering the ward windows, should be carefully avoided. Especially did it appear necessary so to arrange the buildings as to prevent the possibility of dead-house, laundry, kitchen, and neighbouring ward emanations, from interfering with the purity of the air surrounding the patients. So also disregard of the chance of offending or injuring neighbouring dwellings by reason of the proximity of the hospital buildings to them, was found in some cases to have led to much inconvenience and to subsequent expense.

Among the hospitals visited, and where these several necessary conditions have been fulfilled, I would name those in the Bradford, Cheltenham, Tonbridge, and Warrington urban districts, in the Berkhamstead and Solihull rural districts, and that belonging to the Weymouth port authority. In none of these instances does the number of patients per acre exceed twenty. As typical of the reverse conditions the wooden pavilions at Birmingham, which are deemed to suffice for the purposes of some seventy patients per acre, and the three-storeyed buildings at Salford, where some sixty-five patients per acre are accommodated, may be specially noted.

(To be continued.)

## BUILDING IN GLASGOW.

ACCORDING to custom the retiring Dean of Guild of Glasgow gave a summary of the business which had been transacted in his Court during the year ending August 31. He said:—As regards new work the year just closed, and which I will for simplicity's sake still refer to as the present year, has witnessed the turn of the tide. There was, if I may so express it, a full flood tide in 1876. That year 5,746 dwelling-houses were sanctioned. Since then there has been a continual ebbing, until last year, when there were only 418. This year there have been 512. Again, in 1876 the total valuations of the work authorised by the Court amounted to 2,125,249*l*. The falling off from that point was uninterrupted down to last year, when the sum was only 307,640*l*.; but this year the valuation is 378,690*l*. These figures are gratifying so far as they go; but it is to be doubted whether it is even desirable to see them go up again with a rush to anything approaching their height in what may be called the building mania years, 1876 and 1877. The gravitating of the population to the suburbs, and the consequent check on its rate of increase within our boundaries, as well as the great number of empty houses in the city, still give warning on this point. It appears that during the five years 1871-2 to 1875-6 the houses unoccupied averaged 3 per cent. of the whole. During the four succeeding years, notwithstanding the check suddenly put on building, the proportions were found to be 4.9, 6.5, 7.9, and 10.2 per cent. respectively. Last year, out of a total of 119,421 houses within the municipality, 13,407, or no less than 11.22 per cent., were given in the city chamberlain's report as unoccupied. This year there are 119,727 houses in the same area, and 11,804, equal to 9.86 per cent. of them, are still empty. This is not far short of the whole number (12,665) authorised during the last seven years, and represents a loss in annual rental of 118,833*l*. In fact, as the dwelling-houses occupied a year ago were 106,014, and now are 107,923, being an increase of 1,909—against which linings have been granted for 512 new houses—leaving only 1,397 to diminish the quantity of unoccupied property, it would take six years at the same rate to bring down the proportion of empty houses to even the reasonable point of 3 per cent. already



mentioned. The various grades of rent are about proportionally represented in these empty houses, with a preponderance, however, in the case of houses of one apartment. It is a gratifying fact that the percentage of the population pent up in single apartments is gradually diminishing. Nine or ten years ago, as nearly as possible one-third of all the houses in Glasgow had no more accommodation than this; but a year ago the number had fallen to 30·1 per cent., and it seems to be still decreasing. Pointing in the same direction—viz., that of the increasing comfort of the people—is the circumstance that in the half-dozen years preceding this one, the houses of one apartment averaged only 18½ per cent. of those for which linings were granted, and this year they are as low as 7·8 per cent. It is to be hoped that the beneficial influences at work will obviate any temptation in future to the wholesale manufacture of unhealthy habitations of one apartment, by the subdivision of larger houses. Of the warehouses, stores, and workshops authorised this year, it is unnecessary to say more than that their gross valuation is 154,755*l*. Alterations and additions mount up to 71,670*l*. About a quarter of a mile of new streets is included in the year's figures; also halls to the value of 10,065*l*. It may be interesting to note that when the mania for other buildings was at its height, the building of churches seems to have been equally stimulated; for in the two years 1876 and 1877 linings were obtained for twenty-one churches, with a total valuation of 101,500*l*.—almost exactly the same amount as the value of all that have been sanctioned ever since. This year the number is four, and the value 11,700*l*. in all. When additional churches are really required to accommodate the persons willing to attend, no more desirable feature could appear in the records of the Court; but where the effect is simply to subdivide existing congregations already thin—to occupy, in a still more attenuated way, buildings erected in a spirit of ecclesiastical competition—perhaps no other form of overbuilding can be more regrettable. The last item in this year's list is one of 40,500*l*. in all, for five schools—a class of building which happily still requires periodical extension.

#### PROTECTION FROM FIRE IN THEATRES.

A REPORT has been prepared for the Fire Brigade Committee of the Metropolitan Board of Works by Captain Shaw, suggesting the precautions which are supposed to be necessary for the safety of the public in London theatres. At the end of his report he makes some suggestions, among which are the following:—Every theatre should be divided into at least two distinct and separate risks, one before and the other behind the curtain. An outlet for smoke should be made at the back part of the roof over the stage, with an area equal to one-tenth of the area of the stage, and that this outlet be always partly open, and capable at a moment's notice of being thrown completely open. A proportion of each part occupied by the audience should be allowed for passages or gangways, which should always be kept free during a performance. All rows of seats should be divided by gangways, and not more than twenty seats should be allowed between the gangways. The corridors or passages should not be obstructed, as at present, by cloak-rooms, refreshment-rooms, or ticket-boxes. The exit from each part occupied by the audience should be wholly separate from that from any other part, and the several streams should not meet until they reach the open air. After recommending certain other exits, Captain Shaw goes on to say that the gas for the auditorium and that for the stage should be wholly separate and distinct from each other, and in addition to the gas, the auditorium should be lighted with a sufficient number of oil or candle lamps in case of the gas failing. The storage of properties and lumber under the stalls or pit should not be permitted; and no carpentering work should be allowed to be carried on in those places. In all new theatres it would be advisable to lay down as a condition that the large stage opening should be fitted with a metal curtain or screen capable of withstanding for fifteen minutes the effects of any heat likely to come upon it. In old theatres double woollen curtains might be used, with a perforated pipe on top, which could be filled instantly with water by the turning of a handle on the stage side. Captain Shaw then recommends that there should be a universal system of naming the different parts of the house, as at present what was called one thing in one house was called by another name in another house, thereby leading to great confusion. In dealing with the important question of exits, Captain Shaw thought there should be some limit to the distance from the spot in which the most remote visitor was seated to the point of absolute safety. This should not exceed 200 feet or 250 feet, as every audience contained a proportion of stout and old and weak persons, who could not go quickly further than this distance without becoming exhausted, and who in any case influenced the speed of the whole audience in getting away. The practice of closing any of the regular exits during a royal visit was most dangerous, and should on no account be permitted. A separate exit should be made from the royal box to the outer air, which would not interfere with any of the ordinary exits. It should be impressed on all persons employed in and about a theatre that in the event of a panic the essential conditions of safety for an audience were light and air. Of these light came first in import-

ance. However dense smoke might be, it was quite possible for persons to make their way a short distance to fresh air provided they had light; but without light the calmest individual with plenty of room became confused, and a dense crowd is instantly affected with panic, even although there might be no smoke or flame. It was hardly too much to say that, however fiercely a fire on the stage might burn, if it were possible instantly to remove the whole roof and to turn on a very strong light not a single life would be lost. That was a point which did not appear to be sufficiently understood by those engaged in and about theatres, and it should be laid down as a rule that in the event of a panic the first steps to be taken by those responsible should be to turn on all possible lights, to drop the heat-proof curtain, and to open the smoke outlet over the stage. With such an arrangement there would be little probability of a panic continuing, and under the most adverse circumstances the loss of life would not be serious.



#### The Question of the "Apollo" of Calamis and the "Omphalos" at Athens.

SIR,—It will probably be within the memory of readers of *The Architect* who are interested in the subject, that at the close of the correspondence respecting the Choiseul-Gouffier statue—the *Athletic Apollo*—of the British Museum, I left one question respecting it open as awaiting independent and competent evidence. This is the point respecting the supposed relation of an original statue—of which ours, among numerous others, is a copy—to a marble object at Athens, as having originally served it for a base. This object represents the Delphic fillet-bound *Omphalos*—the sacred stone—so called as marking the centre or navel of the world. It is constantly introduced upon the vases in scenes at Delphi as in the very adytum of the temple. The Athenian symbol bears on the top of it impressions prepared to receive a pair of feet; and Mr. A. S. Murray, who gives an engraving of them in his work, had no doubt that their position would suit that of the lost feet of the Athenian copy of our statue. It was a fair inference that the statue must have been dedicated with especial reference to a Delphic oracle, to such an oracle as the Athenians acknowledged their obligation for by the dedication of the *Apollo Alexicacus* of Calamis. So might not irrationally be "thickened other proofs which did demonstrate thinly" that we are in possession of many statues which fairly preserve for us the characteristics of the art of that celebrated early sculptor. Dr. Waldstein, however, expressed himself equally decidedly that the feet of the statue could not be consistently restored to suit the impressions on the *Omphalos*, and so he disposed of one objection to his view that the statue is no Apollo at all but simply represents a human athletic victor.

The question which was left open may now be considered as settled, and so far in favour of Dr. Waldstein, by testimony beyond cavil. A letter has been received from Sir Frederic Leighton at Athens, which gives us this conclusion:—

"I have examined with care the *Omphalos* in the Museum here, and in Vienna a cast of it, over which the Apollo is rather clumsily poised on irons, and I cannot escape the conviction that the footprints and the figure could in no case be brought into harmony. I say 'in no case' because I do not think that the best case is made for the combination in the arrangement at Vienna."

It will be observed that the disposal of this matter of the adventitious *Omphalos* in no way affects the general question of whether our statue is divine or human—Apollo as patron of athletes or an athlete; it does not even weaken materially the not unimportant force of presumptions that it may even be a representation of the celebrated work of Calamis. Among these presumptions the strongest are accordance of style with what is recorded of his work and epoch—precarious as this may be when relied on alone; then the peculiarly Delphic ascription of athletic proclivities to Apollo; and in conclusion the intimation obtained from the scholiast of Pindar that the Apollo of Cyrene—from whose temple we have a repetition of the head of our statue—was venerated for the very functions which are implied in the title *Alexicacus*.

Cordial acknowledgments are due to the President of the Royal Academy—the sculptor of the *Athlete and the Python*—for a service so carefully and cordially rendered.

Your obedient servant,  
W. WATKISS LLOYD.

**Ongar.**—The foundation-stone of a small church at High Ongar has been laid; the cost of the edifice is estimated at about 1,150*l*., exclusive of fittings, architect's fees, &c. Mr. J. Clarke is the architect.

**Ardwick.**—The church of St. Thomas has been reopened after repair. The work has been carried out under the superintendence of Messrs. Royle & Bennett, architects, of Manchester, at a cost of about 1,700*l*.



## GENERAL.

**Mr. William Moffat**, architect, died on Monday last at Hamilton, where he had practised for twenty years.

**Sir Joseph Whitworth** has presented the Manchester Corporation with four paintings by W. Etty, R.A.—the first gift received by the Corporation for the future art gallery. They comprise Etty's *Last Judgment*, *Godfrey de Bouillon*, a portrait of the artist, and a painting of a peacock.

**Mr. Lansdown and Mr. Lockwood** have consented to an amalgamation of their plans for the erection of a new Town-hall at Newport, Mon.

**Mr. F. Elkington** has intimated to the Birmingham Corporation his intention of presenting the Art Gallery with a picture by the late Henry Dawson, and one by James Docharty, the Scotch artist.

**Mr. A. W. Smith**, architect, of Manchester, has prepared plans for the new church of St. Gabriel, Middleton Junction.

**Sir Massey Lopes** has given 200*l.* to be invested as the nucleus of a trust fund for the repairs of Westbury Parish Church.

**Mr. John Burnet** has prepared a design for new offices for the Clyde Navigation Trust in Glasgow, and on Tuesday the trustees gave instructions for the working drawings to be prepared.

**Messrs. Dockwray & Thompson**, architects, of Newcastle-on-Tyne, have dissolved partnership. The practice will be carried on by Mr. J. W. Thompson.

**Mr. J. E. Stafford, of Liverpool**, has been appointed borough surveyor for Burnley. There were ninety-three applications for the office.

**Messrs. Robert Boyle & Son's** system of ventilation has been selected by the committee and architect for the ventilation of "Lloyd's," Royal Exchange, where it is being at present applied. Messrs. Boyle's system is also being applied to Claremont, the residence of H.R.H. the Duke of Albany, and has been adopted for the ventilation of Portland Prison.

**Mr. R. Anderson, F.C.S.**, is preparing for publication the papers on lightning-conductors read by him at meetings of the British Association.

**The Sales of Pictures** at the Liverpool Autumn Exhibition amounted this year to 4,344*l.*, as against 3,371*l.* last year. The receipts were 1,272*l.*, against 1,310*l.* of last year.

**A Meeting** of the subscribers of the proposed new County Buildings for Forfarshire has been held. As the Commissioners of Supply were of opinion that no new buildings were necessary, it was resolved to redistribute the funds collected, which amounted to 3,425*l.* 4*s.* 7*d.*

**Mons. A. de Neuville** has been commissioned by the Fine Art Society to proceed to Egypt to paint a large picture illustrative of the campaign. The storming of Tel-el-Kebir will probably form the subject of the painting.

**The Kidderminster Board of Guardians**, at a meeting on Tuesday, selected the plans of Messrs. Watkins & Scorer, of Lincoln, sent in in competition for extension of the Workhouse, the estimate for carrying out which is from 10,000*l.* to 11,000*l.* Mr. Morton, of South Shields, obtained the second premium.

**Mr. J. Gordon** has prepared a report for the Trades' House, Glasgow, in which he recommends the reconstruction of the whole property of the Trades' House situated between Glassford and Virginia Streets, at an assumed cost of from 12,000*l.* to 15,000*l.*, and an estimated new rental of 1,500*l.*, exclusive of hall and saloon. According to a former estimate, the outlay would be 40,000*l.*

**The Parish Church of St. James**, Clerkenwell, which has been restored by Mr. A. W. Blomfield, will be reopened by the Lord Mayor and Sheriffs on the 13th inst. Two large painted windows have been presented by the Crusader Lodge of Freemasons, which were executed by Mr. C. Evans.

**Mr. J. Tilman, F.R.I.B.A.**, of Sunderland, was on Tuesday, at Newcastle, re-elected President of the Northern Architectural Association.

**Messrs. W. H. Lindsay & Co.**, of the Paddington Iron Works, designed and constructed the iron roof without tie-rods, and the whole of the constructional ironwork of the Baths at Finsbury Park, which were illustrated in *The Architect* last week.

**The Church of St. Nicholas**, at King's Norton, near Birmingham, has just been restored, under the direction of Mr. William Hale. The whole of the encaustic tiling was executed by Webb's Worcester Tileries Company, Limited, Worcester.

**"The Pictorial World."**—It is difficult nowadays to introduce a novelty into newspaper illustrations, but the portraits of the English generals engaged in the Egyptian war may well claim that title. Apart from the present interest, as specimens of lithography they are deserving of preservation. They are truthful portraits and vigorous examples of draughtsmanship.

**A Large Vault** belonging to the Hales family has been discovered, immediately in front of, and to all appearance extending under the altar up to the east wall of Thanington Church, Kent.

**A Statute** has just been issued to establish a market for fish and other provisions near the Elephant and Castle, Newington Causeway. The capital of the company is to be 250,000*l.*, and property for the market can be compulsorily purchased within three years.

**A Conversazione of the Manchester Literary Club** was held on Monday evening at the Grosvenor Hotel. There was an exhibition of the works of some of the members, including Messrs. Houghton Hague, Richard Wane, J. H. E. Partington, W. Robinson, Ward Heys, William Percy, H. F. Warden, George Hayes, and F. J. Shield.

**The Palatine Hall, Lancaster**, is to be altered and improved early next year. A design by Mr. G. D. Oliver, of Carlisle, has been adopted by the Committee of Trustees.

**The Hotel de Ville, Sens**, being no longer required for municipal purposes, is in danger of demolition.

**The Designs** which were prepared by Mr. J. A. McBride, sculptor, of Liverpool, for the competition for the panels of St. George's Hall have been purchased in order that they may be presented to some public institution.

**A Memorial Window** is to be erected in Newbury Parish Church to John Winchcombe, the clothier of the sixteenth century, familiarly known as "Jack of Newbury." Newbury Church was chiefly built by him.

**Plans** for the extension of the Town Hall, Ripon, prepared by Mr. Hiscoe, architect, of Harrogate, have been forwarded to Lord Ripon in India for approval.

**St. Bartholomew's Parish Church**, Radcliffe, is being restored under the direction of Messrs. J. Medland and Henry Taylor, architects, of Manchester.

**Ashborne Parish Church**, restored from the plans of Mr. G. L. Abbott, architect, has just been reopened.

**The St. Nicholas Parochial Board**, Aberdeen, have adopted a report recommending the erection of a lunatic asylum for 250 to 300 patients, at a cost of from 12,000*l.* to 15,000*l.*

**The Theatre Royal, Leamington**, built from the designs of Messrs. Osborne & Reading, Birmingham, and Mr. C. J. Phipps, London, was opened to the public on Monday.

**The Clyde Trustees** have decided to obtain Parliamentary powers for the construction of a dock on the south side of the river to cover about eighty acres of ground, at an estimated cost of a million sterling.

**Six sets of plans** have been submitted by Edinburgh and Leith architects in competition for the proposed Sailors' Home at Leith.

**Messrs. Siemens** have lighted part of Hull with the electric light. There are altogether twenty-six street lamps. Four are each of 3,000-candle power, and are large alabaster globes on tubular stands, the light being suspended at a height of about 50 feet. Twenty-two lamps are of 350-candle power each, and are also placed in alabaster globes, but only at a height of 20 feet from the ground. The contract is for twelve months.

**The Sanitary Institute Awards.**—The following medals have been awarded in connection with the exhibition at Newcastle-on-Tyne:—Messrs. Hayward, Tyler & Co., London, for "full flush" valveless closet; Messrs. Mather & Armstrong, Newcastle-on-Tyne, for Siemens' patent regenerative gas-burner; Mr. C. D. Ward<sup>1</sup> London, for household closet; the British Sanitary Company, for dry earth closet; Messrs. Wilkinson & Co., Newcastle-on-Tyne, for damp-proof concrete pavement; La Société and Hygiène Française, Paris, for their exhibit of books on hygiene; Messrs. Manlove, Alliott, Fryer & Co., Nottingham, for Fryer's patent destructor and Fryer's patent carboniser; Firmen's patent dessicating and rendering apparatus; Messrs. Thos. Bradford, London, for washing machines; Mr. James Stott, Oldham, patent mercury gas governor; the Wilson Engineering Company, London, for improved Wilson range with steel boiler and non-conducting jacketting; Mr. J. A. G. Ross, Newcastle-on-Tyne, patent silicate cotton (stag wool).

**Rateable Value of the Metropolis.**—The rateable value of the several parishes and districts of the metropolis is thus stated in a return just issued by the Local Government Board:—Bethnal Green, 364,336*l.*; Camberwell, 851,469*l.*; Chelsea, 489,531*l.*; Fulham, 584,951*l.*; St. George's, Hanover Square, 2,293,015*l.*; St. George-in-the-East, 199,752*l.*; Bloomsbury, 362,206*l.*; Greenwich, 630,677*l.*; Hackney, 970,299*l.*; Hampstead, 439,228*l.*; Holborn, 923,537*l.*; Islington, 1,485,436*l.*; Kensington, 1,665,983*l.*; Lambeth, 1,307,746*l.*; Lewisham, 568,098*l.*; City of London, 3,566,394*l.*; Marylebone, 1,392,531*l.*; Mile End Old Town, 337,513*l.*; St. Olave's, 794,444*l.*; Paddington, 1,206,054*l.*; St. Pancras, 1,479,484*l.*; Poplar, 682,074*l.*; St. Saviour's, 947,225*l.*; Shoreditch, 585,452*l.*; Stepney, 319,653*l.*; Strand, 716,470*l.*; Wandsworth and Clapham, 1,239,944*l.*; Westminster, 789,227*l.*; Whitechapel, 371,520*l.*; Woolwich, 289,349*l.*; Lincoln's Inn, 18,800*l.* Total, 27,872,398*l.*



# The Architect.

## ARTLESS ARCHITECTURE AT ST. ALBANS.



THE world of culture has been so long accustomed to call Architecture an Art, one of the Fine Arts, the Queen of the Arts, the Metaphysics of the Arts, and so forth, that even in this practical country of England, even amongst this nation of *boutiquiers*, even in these most plain-speaking days of all days, and even under the teaching of so astute a philosopher as Sir EDMUND

BECKETT, we must be allowed to claim a little forbearance if we are unable all at once to see the jest, or solve the conundrum, or appreciate the paradox, or in whatever other way realise the idea, that an architect is never an artist but always something else. But Sir EDMUND BECKETT is urging upon us this novel sentiment with so much authority, and with such persistent iteration, that if we do not attempt to arrive at some kind of understanding upon it, the very bases of our technical terminology may be shaken. "Art," says at St. Albans the other day this undeniably expert and experienced critic of men and words, "is a multiplex subject." No doubt it is. "It means a good many things." No doubt it does. "There is the art of making bread, and the art of making clothes." Of course; and there is the art of making the worse appear the better reason. "People who call themselves artists are equally liberal and comprehensive in their terms." This also is true enough; if the word *Art* is vague, so will the word *Artist* be vague. "I have had a good deal to do with architects," Sir EDMUND goes on, by way of a particularly pointed illustration; "and I have always found that *they*, for some reason or other, wish to call themselves artists, though *I* have never been able to make out why! It seems to me that an architect is *not* an artist. An artist *must* do something with his fingers. It is not with his mind that he works entirely. An architect does not do anything with his fingers;" and so on. If we close this quotation with the remark that, according to some other critics, the architect of modern times does not do much with his mind either, or with what, in the late Lord WESTBURY'S well-known phrase, he is pleased to call his mind, Sir EDMUND may possibly thank us for completing the picture of that perfect professional incapacity of the artful order upon which he is so passionately fond of descanting, as himself a competitor and rival of the artless order, emphatically artless.

Now, to an architectural person of sufficiently vertebrate character—if any such there be—Sir EDMUND BECKETT must be the most delightful of men. Like TENNYSON'S tower, he "stands four-square to all the winds that blow." From his cradle—if he ever condescended to use one—he has been the supreme Bogie of architects of the temperament that may be called meek and mild. Even the more courageous leaders of the craft have quailed before him, and something more. By a characteristic stroke of genius the Brahmins of the Council recently elected him, for instance, an Honorary Associate of the very Institute itself. This was in the childlike hope that, by holding the candle to him, they might propitiate him and induce him to abate his plain speaking. Vain thought! Ever since that very day he has paid his two guineas yearly to their funds, laughed at their beards, and scoffed more than ever at their fatuous confidence. They invite him now and then specially—affecting to regard him as one of themselves—to attend a meeting and make a speech; and any one who wishes to hear, not covert, but open sarcasm at its keenest, ought to hear that speech. He lectured them once upon Domes. He quietly began his lecture by saying that he would ask them to take the principal part of it "as read," inasmuch as there was not one man amongst them who could possibly understand it, or only one who was a mathematician. On another occasion they asked him to take up the amiable subject of Competitions; and when some one in debate ventured to suggest that, as in the learned gentleman's own profession, and all others of any intellectual respectability, junior architectural practitioners ought to behave towards their seniors with a little consideration, he treated the idea with

open and loud laughter—so little in the way of intellectual respectability did he see around him. More recently, as everybody knows, he has taken into his own strong hands, by *force majeure*, the restoration of one of our cathedrals; and when our chief ecclesiastical architects pointed out in their timorous way that such an undertaking, as a matter of most difficult design, ought, in the interest of public taste and patriotism, to have the ordinary advantage of expert professional handling, he snapped his fingers at them all, and at everybody who thought as they thought; and, to the disgrace of even a nation of *boutiquiers*, he is consequently allowed by bishops and chancellors and other such trustees of our national monuments and ecclesiastical honour to do as he lists with the edifice, so long as he finds the money and takes the risk of the inevitable posthumous shame. But what makes such a man especially admirable is that he does all this with such perfect good humour. Hitting as hard as he possibly can at every architectural opponent, whom he succeeds in catching before he can run away, he not only permits, but appears to expect, every one of them to hit him as hard as he possibly can in return. He is none of your thin-skinned fighters; if he gives no quarter, he asks none; if he laughs you to scorn, he lets you laugh at him again, your best and your loudest laugh. What think ye, O ye architects! is the origin of you all? It is "Mothers"—says he—be it observed *Mothers*—"with young gentlemen who can draw 'pretty things,' that put their sons into architects' offices"! That is the way it is done. The master, he further explains, takes three or four hundred pounds of the widow's money for this; sets her boy to copy his specifications and drawings, and to copy them over and over again; and then the young gentleman takes an office, affixes a brass plate to the door, and is "an architect"! It would be idle to deny that this is very hard hitting, even if scarcely honest. May we express the hope that the President of the Institute, in the brilliant address with which in about a fortnight's time he will open another laborious and splendid session of that body, will have a kind word to say in acknowledgment of this pleasing witticism? One thing we can promise is that the more he has to say, and the more pointedly he may say it, all the better pleased will this jocular tormentor be.

Of course architecture is not an "art" if done in the artless way in which it can be done, and, alas, is done, by such an architect as Sir EDMUND himself is at St. Albans Abbey; and inasmuch as, in architecture as in all else, every operator takes its merits at his own valuation, we may get at the bottom of the paradox that an architect is not an artist by the simple explanation that the Art goes before the Architecture, and not after it. Our school children have a question which is considered very great fun when one does not remember the answer—When is a door not a door? The answer is, When it is a-jar. Well, when is an architect not an artist? May we suggest the frivolous reply—When he is a Q.C., a baronet, or any other kind of artless amateur. He who, being a non-artist, designs a building as best he can, however well pleased he may be with himself, remains as he was, a non-artist; just as he who, being an artist, does not design a building at all, remains the artist he was nevertheless. The sort of architects with whom Sir EDMUND BECKETT appears to be just now more particularly dissatisfied, or perhaps satisfied—the gentlemen who are made architects by their mammas—may probably be not great artists; especially if to acquire the title of artist (it must be an enviable one, or it would not be so very earnestly dealt with by Sir EDMUND himself) they do nothing more than pay a premium, copy a few specifications and drawings, and affix a brass plate to a door. We may even go so far as freely to own that a large proportion of the commonplace "architects and surveyors" of our London streets and provincial towns make no particular pretension to be artists; and if what Sir EDMUND BECKETT means is no more than this—that a man need not be of an especially artistic turn of mind in order to practice the design and supervision of building business in this unpretentious but most useful way, no architect, artist or not artist, need disagree with him. But this is quite a different thing from affirming as a philosophical proposition that architectural design is not one of the forms of fine art. If Sir EDMUND only wishes to have a fling at the principle of regular ordination, for the purpose of asserting his own personal independence of all regulation and order as a free lance, let us enjoy his pleasantry and have done with it; but if he professes to be teaching us something that we do not know, we must beg him to go into a little further explanation.



If the artist be only one who "does something with his fingers," is the fiddler the artist whilst HANDEL and BEETHOVEN are not? Does the art of "Paradise Lost" pertain, not to the grand old blind man whose lips spoke, but to the grudging daughter whose fingers held the pen? Fingers or no fingers, is there no "art," or artifice of grace, or artificial beauty, in the composition of St. Paul's or Westminster Abbey, the Parthenon, GIOTTO's Campanile, or the Taj Mehal? Are all these mere piles of stones fortuitously aggregated? Have the form and fashion of them grown out of the ground like a cabbage; or come forth from the egg by process of animal mechanism; or, heaven knows how, been brought about by the necessities of masonry, which the mere fitness of things would cause to collapse but for those cornices and string-courses, columns and piers, vaultings and traceries, and all-pervading intricate proportions, full of mysterious thought and exquisite calculation? The writer of an argument like the present need not be himself a great artist—he may even be content to feel that he is a very small one as Nature made him—and yet he may be permitted to assert that amongst all the pleasures of intellectual life there is perhaps absolutely nothing that surpasses, and little that equals, the delight of architectural design, as an exercise of the specially instructed imagination. To this there are so many that can testify, and there have always been so many, that it is utterly vain even for Sir EDMUND BECKETT to pretend to believe that he can dispute their testimony. And thus it is that all through the ages, and all over the globe, in one degree or another, the *art* of architectural composition has been one of the most conspicuous products of the genius of mankind. To say that art is a thing that has to be done by one's fingers, and not in one's head, is at the best a perfectly unsupported and pedantic affectation of language. In the mouth of an audacious forensic advocate, the artifice may be characteristic enough; and it might have what is called its weight with a tribunal ignorant of the subject; but no artist in the world could for a moment be so mystified, and architecture, in spite of such frivolous and empty sophisms, remains as it has always been, not only an art, but the grandest of all.

If we may venture to offer a word of advice, not to Sir EDMUND BECKETT who is inaccessible to it, but to those who read his clever books, listen to his clever speeches, and may be tempted to imitate his clever ways, we would observe that, at the present critical time in our national progress, no greater wrong or greater folly can be committed than to degrade the character of artistic work for the sake of a splenetic jest, or discourage the ambition of artistic workers in the interest of pragmatical assurance. The utmost concession that we can honestly offer to the proposition before us is the expression of our perfect willingness that the author of it may go down to posterity, if he so desires, under the name of *the artless architect of St. Albans*.

#### ANCIENT MARBLES IN GREAT BRITAIN.\*

THE private collections of ancient sculptures in this country, though valuable and attractive in many ways to the archæologist, have a special interest for architects. In most cases it was not for their importance as works of ancient art that these sculptures were collected. The first necessity was that they should fit into places carefully planned and prepared in the mansions of our aristocracy with a knowledge that sculptures of such and such a kind were obtainable. Provision was made for so many busts and so many statues. Agents in Rome or elsewhere were directed to be on the outlook for what was wanted, and to make excavations on promising sites. During the last century this form of activity was at its best, and though there may have been a great want of originality in it there was yet a fine sense of stately effect and an appreciation of solid and substantial workmanship. The interior of a mansion was more thought of than its exterior. It may be said that mistakes were frequently made in the interiors also, on the ground that ancient sculptures, if they were worth collecting, should not be sacrificed to what was supposed to be a stately effect in the rooms or galleries in which they are placed. But, as we have said, these sculptures were brought together for the secondary purpose of helping out this effect, and either this purpose

was radically wrong or the statues are properly placed in secondary positions. What justifies the purpose is the fact that these sculptures were collected openly without regard to their being great masterpieces. It was enough if they were fairly well executed, and it was imperative that they should be carefully restored and made to look complete. With pride in the possession of ancient works of art was associated a taste for finish; even the vexatious finish of the restorer was welcome. Men like PAYNE KNIGHT, who ruled the taste of his day, saw nothing to admire in the headless statues of the Parthenon; the frieze being more perfectly preserved pleased them much more. What pleased them best was a fairly well executed Græco-Roman copy of a good original.

No doubt in these mansions the task of the architect was sometimes hardly worthy of his vocation and gave little scope for his originality. In any case it is a task which cannot well recur now, since ancient sculptures are no longer to be obtained in necessary numbers. Yet the classicalism of this country in its relation to ancient sculptures is a feature in the history of architecture which cannot be despised, and if its literary and archæological details are to be studied anywhere with advantage it is in the large volume just issued in an English dress by Professor MICHAELIS. He has bestowed infinite care on his subject, and if nothing else was to be gained from his book, it would be a sense of the vast amount of decorative materials that exist in the mansions of this country.

The principal object of Professor MICHAELIS was to present in a convenient form an account of all the private collections of ancient sculptures for the use of students of archæology, who hitherto had to search for such information as they wanted in scattered catalogues and notices, most of them difficult of access and many so far behind the time as to be useless. To these students he has rendered a valuable service. They can see at once what sculptures there are, for instance, in Lansdowne House, Woburn Abbey, Ince-Blundell Hall, or Petworth House, and can find where engravings of them are to be seen, when such exist. But he has not altogether confined himself to private mansions. His plan embraces the sculptures belonging to the Universities of Oxford and Cambridge, the Antiquarian Museum in Edinburgh, and the Soane Museum in London; while even as regards the British Museum he gives a sketch of how some of the collections afterwards absorbed in it were originally formed. When he imagines that the British Museum must ultimately receive these scattered collections which he now describes, we can only hope that he is, on the whole, mistaken. For although they contain not a few specimens which would grace any national museum, yet the rank and file of the sculptures are better fitted for where they are. The *Amazon* in Lansdowne House and that other ancient copy from the same original in Petworth House might with advantage be placed side by side in a public gallery; and so with many others, such as the fine bust at Petworth engraved in the present volume.

The passion for collecting ancient marbles dates from the beginning of the seventeenth century, the then Earl of ARUNDEL AND SURREY being its first great representative, and being, as it appears, largely influenced in his tastes by INIGO JONES. It was not Rome so much as Asia Minor and the Greek Islands that were then laid under contribution. Next followed the Duke of BUCKINGHAM, CHARLES I., and others, who to obtain sculptures against such competitors as Cardinal MAZARIN or Queen CHRISTINA of Sweden had often to pay prices which would now be regarded as very exorbitant. The principal collections formed during the age of the STUARTS were the Royal, the Arundel, and the Pembroke collections, and of these only the last has remained to our time.

It is, however, the eighteenth century that Professor MICHAELIS describes as the "Golden Age of Classic Dilettantism" in England, and of this period he gives a long and interesting account. It is a story such as few could picture of extraordinary activity in the pursuit of works of art, and it is a story which few could read without pride. For the early part of this period Rome had been the chief source of supply. But towards its close the spirit of acquisition, if not also of a truer taste, began to lead men to Greece, and in time such fortunate discoveries were made as those of the *Ægina* sculptures now in Munich, and the temple of Apollo at Phigaleia in Arcadia. In those days STUART and COKERELL represented English architecture in its classical side, and under their influence knowledge at least was vastly extended. The climax of collecting was reached by Lord ELGIN, not only in the quality

\* Ancient Marbles in Great Britain. By Professor A. Michaelis. Translated from the German by C. A. M. Fennell. Cambridge: The University Press. 1882.



and quantity of what he obtained, but in the purpose by which he was guided. That purpose was not the embellishment of a private mansion, but the enrichment of a public museum. He began, it is true, like his predecessors, in what is called the Dilettanti spirit, with the object of acquiring new ideas for the decoration of his own house. But that was soon forgotten in the desire to rescue the sculptures of the Parthenon, and secure them for the English nation.

In our time ancient sculptures are difficult to obtain, most of all by private persons, and accordingly the spirit of collecting, so far as it extends to classical antiquities, is directed to smaller and more portable objects, such as gems, coins, and vases. There are still scattered through the country a number of very valuable collections of vases and gems, little known beyond the circle of their possessors. A catalogue of them also would be interesting. Loan exhibitions, such as have brought the "Old Masters" within general knowledge, are hardly to be thought of. Sculptures of this kind are not easy to move with safety to them, while again many of them, as we have said, would have little charm outside of the niche or gallery where they stand at present. Vases, and especially engraved gems, can only be seen slowly and with far more minute attention than could be bestowed on them in a public exhibition of a temporary nature. We must be satisfied, therefore, with looking forward to an ample catalogue of them such as Professor MICHAELIS has produced for the ancient marbles.

### THE DUNDEE FINE ART EXHIBITION.

THE sixth Fine Art Exhibition held in Dundee was opened on Saturday by Sir William Fettes Douglas, President of the Royal Scottish Academy. The ceremony was carried out in the Albert Institute Buildings. Mr. Frank Henderson, M.P., presided, and introduced the President of the Royal Scottish Academy to the meeting.

Sir William Fettes Douglas said: The attention now given to art in this country is one of the most curious of the innumerable reasonable, unreasonable, and fantastic fashions of the day. Even fifty years ago art was recognised only by the few, and they recognised it as a very trifling, although sometimes pleasant, accomplishment, and never dreamt it could ever become, as it is daily becoming, a great power in the world; indeed, it seems not unlikely to usurp a larger share of the world's attention than it can or ought legitimately to claim. Books of to-day very often consist of pictures, with a word or two of letterpress—not, as in a proper division of labour, of letterpress, with accompanying pictorial illustrations. And we seem fast returning—though under very different influences—to the style of the earliest printed books—viz., "The Bibles for the Poor," which consisted of pictures only, or pictures with a word or two incorporated in the woodcuts. Indeed, unless it be in the gloomy regions of abstract science, every department of human activity calls in the assistance of art. Natural philosophy claims its help, history claims its illustration, and romance seeks to add art's piquancy to its own; and I need not speak of its activity as an advertising medium. The work of the physicist is explained by it, and the mind of the child is ripened by it. Much of all this, as I said before, is the result of fashion; but it is to be hoped that before the fashion can change art will have become incorporated, so to speak, in the very nature of the next and succeeding generations, and will then hold its position permanently as a necessity of life. Nowhere has this change in art's position shown itself more remarkably than in the picture-books of the nursery. They represent a real advance; a generation ago they were worse than weak and uglier than bad—now they are prodigies of luxuriant ability; and in this matter we must recognise a vital factor in the progress of art generally, because the unconscious education children receive from these silent companions, their picture-books, must have a permanent effect upon their future tastes and habits; and the improved and really high quality of many of the children's books of to-day will render even the most obtuse among them impatient of the presence of all that is rude and unrefined. As in morals constant contact with pure and upright conduct is the best, indeed the only true, education, so in art familiarity with beautiful—not necessarily expensive—objects will inform better than a thousand schools. They speak a language which does not need to be learned, and is more eloquent than the thousand conventions and rules of a thousand teachers. Next to the influence of children's picture-books in the formation of art feeling—but, as I sincerely believe, only next to, and not before them—is the influence of art exhibitions. They appeal, no doubt, to the riper and more cultivated mind, and ought to carry on and further the education earlier begun; but though theoretically true, this is not always practically possible. We have the best art power of the whole world producing children's books and illustrations to popular literature; while all local exhibitions must depend more or less upon local ability. Keeping this in view, the

Committee of the Dundee Fine Art Association deserve no ordinary praise for the collection they have this year gathered together in these rooms. It is probably the finest exhibition hitherto seen north of the Forth, and it is to a great extent free from any local or provincial character. Some of the most eminent of our English contemporaries are well represented upon the walls, and a large proportion of the members of our Scotch school seem to have put their best foot foremost, and show themselves literally in their best colours. The public and artists themselves are quite unable to appreciate the labour and the various annoyances and difficulties—I've even heard of dangers—encountered in getting together such an exhibition as this, and no one who has not served on a committee of arrangement, or, as it is termed professionally, a hanging committee, can understand the embarrassment, and not seldom the pain, experienced in making final decisions. A member of the hanging committee ought to begin his labours with the principle that he must have no friends, and when he has finished he will probably find himself blessed with many enemies. It is almost impossible to do justly and love mercy in exhibition arrangements; these two qualities are generally found to be absolutely incompatible with each other; moral reasons, conventional reasons, and mechanical reasons, all make a tangled skein of his best intentions, and he who went in as a man of principle and benevolence comes out of the ordeal a demoralised cynic. I see it stated in your leading journal that your last exhibition was relatively in one respect more successful than any other in the country, or, indeed, in the empire. And the exhibition committee of a smaller and more local exhibition, in a town not a thousand miles from this place, makes a somewhat similar assertion. The statement is founded simply and solely upon the large amount of sales effected during the season; and there is a congratulatory chuckle accompanying this very satisfactory statement which would be allowable enough did it not stand alone in an apparently all-sufficient isolation. I sincerely hope, and do not doubt, the present exhibition will afford its promoters an equal amount of satisfaction from the same point of view; and there is no doubt men must live before they can enjoy life; but Committees and Councils may not forget that such gatherings of works of refinement and beauty are not mere bazaars, and are, or ought to be, primarily for the advantage of the public, and the advancement of local, and ultimately of national, taste. In this country, and in the vast majority of the very best of us, a love of art is an artificial accomplishment, and not a spontaneous feeling. Probably the spontaneity will supervene after ages of culture, for habits of mind are as certainly transmissible as habits of body, aptitude for culture not less so than tendency to crime; and with our mind's eye we may look forward to our successors possessing intuitively that sense of the beautiful and the true which may make life in itself and its surroundings one long enjoyment. I have nothing further to add than to say that after repeated examination of the exhibition I am quite convinced it is the finest I have ever seen almost north of the Tweed, certainly north of the Forth, and I hereby declare it open.

Lord Strathmore proposed a vote of thanks to Sir William Fettes Douglas for his very interesting address. They would have observed that there was a vein of quiet humour running through the address, which freed it from that stiff character which so often attached to addresses of that sort. They had much pleasure in hearing it, and it was worthy of being read over again in the newspapers.

Lord Kinnaid, in moving a vote of thanks to the chairman, remarked that the address just delivered by Sir William Douglas was the most interesting he had ever heard.

The President, in replying, said he was exceedingly obliged to them for the vote just given to him. It was now his duty to inform them that the galleries were open for their inspection, and to express the hope, which many there had secretly expressed to themselves during the course of the preparations for this exhibition, that it would not be less successful than any of its predecessors, and that it would still further encourage gentlemen who had taken much trouble and pains to bring such a collection of pictures together to do so on future occasions.

In the afternoon Sir W. Fettes Douglas was entertained at a luncheon, at which Mr. Henderson also presided.

In replying to the toast of "The Royal Scottish Academy," the President said that the Royal Scottish Academy had shown itself to be a very good mother to artists, and that the existence and progress of the Academy, the progress in art, and the improvement in general feeling and culture in Scotland, were nearly synonymous. The Academy at the present day had a very severe struggle, because it had to fight against the loss of its own body; it had to fight against its artists' going away from its own bosom. But many of its best men still remained in Scotland, and some of them were present at the ceremony in Dundee that day. If they had all their men from London, there would not be a better exhibition than theirs on the face of the earth. If they were only able to keep their men from those rascally English, and that sink of iniquity London, they would be able to hold their own with the world, because the Scottish school was very distinctive in its character. He hoped the strong tendency the younger men had nowadays to copy the French school would not make them forget



their nationality altogether. There was a feeling that it had introduced various improvements, and done much good in the school, but still, while he felt those advantages, he would rather see the artists utterly Scotch, and almost local in their views, than see them leave Scotland altogether.

Mr. Vallance, R.S.A., proposed "Success to the Dundee Exhibition." He was most anxious to get the prayers of the gentlemen present for the success of the exhibition, but, he asked, could there be any doubt about its success? This was its sixth year; it had served an apprenticeship; and there were such men at the head of affairs—such hands upon the rudder steering—that they could scarcely fear for its future. He was much delighted going through the galleries in the Albert Institute that day. Picture after picture seemed to force itself upon him, and one which struck him very much was the little picture of a girl with a bird upon her shoulder. It was a charming piece of art, and while he was looking at it anxiously he heard a good lady say, "Aye, it's a grand gift; a grand gift to the permanent gallery." He was rude enough to ask who presented it, and although he was told it was rather a secret, yet he learned that it was Mr. Orchar. When they had such men as Mr. Orchar, Mr. Simpson, Mr. Ritchie, and a host of others working with and working for art in such a living way, did they fear? He did not. He hoped that the exhibition would be a great success, and that its promoters would be long spared to work in the cause of art.

Mr. Orchar said the exhibition was not so well known at one time as it was now, and one of the great difficulties the promoters had to contend with was to get pictures from the best artists. Now, however, they were getting such pictures; and he was sure from what he saw that year after year they would be able to show something at least not inferior to what was on view that day. The promoters were disappointed in not getting pictures from gentlemen whom they wished to see represented in the galleries, but a few collectors had kindly granted the use of works by the gentlemen he referred to; and to those collectors—especially to Mr. Macdonald, of Aberdeen—they desired to tender their warmest thanks. It was a great satisfaction to the promoters to know that their services had met with approval, and he hoped the fruit of their labours would be seen in the success of the exhibition.

Mr. Ritchie proposed "Local Art and Artists," mentioning that there were about 200 collectors of pictures in Dundee, and seventy local contributors to the exhibition last year; while twenty or twenty-five years ago there were no artists, and only some half-dozen collectors.

## HOSPITAL CONSTRUCTION.

(Concluded from page 226.)

IN all efficient hospitals which have, within a recent date, been provided for the isolation and treatment of cases of different infectious fevers the buildings are so constructed that patients suffering from each separate disease may be in a separate building, having no enclosed means of communication with any other hospital building. This result is, as a rule, obtained by the construction of pavilions, standing at a proper distance from each other, and from the administrative building. In the case of a one-storeyed building each pavilion contains as a rule two wards, one at either end, for each sex, the wards being separated in the centre by an entrance lobby and certain administrative apartments. In the case of a two-storeyed building the pavilion has a male ward on the ground floor, and a female ward upstairs, each floor having a separate lobby and administrative rooms.

In the arrangement of the buildings it has been found that the distance between the several pavilions, and between them and the administrative block, should, if possible, be equal to one and a half times their height when the buildings are of equal height, and, if otherwise, at least equal to the full height of the higher of the two adjacent buildings; also that the means of communication between them should be limited to a roofed passage, either entirely open at the sides or having permanent openings facing each other in the opposite side walls, or again to a roofed passage fitted with a central partition and being completely open on both sides of the partition, the persons using the passage walking on the lee side of the partition.

In the case of a smallpox pavilion, it has appeared to me that the separation between it and the other hospital buildings should, if possible, be even more complete, and where such an arrangement can be carried out, that the administrative apartments it contains should be such as to reduce communication with the administrative block to a minimum. Especially should there be in connection with the pavilion separate sleeping accommodation for nurses. In some districts, as at Folkestone, the smallpox hospital is an entirely separate institution, situated at a distance from the hospital for the other infectious fevers. In several hospitals visited smallpox is not admitted.

With reference to the construction of the pavilions, regard has, in all good hospitals, been had to the conditions deemed necessary in the construction of a good dwelling-house. The foundations

have been laid in a soil free from animal or vegetable matter; the whole ground surface of the site has been underdrained when necessary, and in some of the better examples of hospital buildings it has been covered with a layer of cement concrete or asphalt, or it has been otherwise prepared so as to exclude both dampness and also emanations from the soil, which might subsequently become contaminated, as by accidental leakage from a drain. The walls have consisted of good bricks, of hard stone, or of a combination of the two, or of some similar material such as concrete; they have been provided with an efficient damp-course; and with a view to the maintenance of an equable ward-temperature, it has been found necessary that they should be at least 14 inches in thickness. It has also been found necessary to provide windows in each of the opposite side walls. The roof, whether of slates or tiles, has been in great part or entirely ceiled within. Where, as in Sheffield, flat roofs have been made, they can conveniently be constructed of concrete, asphalt, or other similar material.

The floors, provided beneath with means of ventilation into the outer air, have in all cases consisted of wood, and when this has been both well-seasoned and so laid as to prevent the occurrence of spaces between the planks, the result has been fully satisfactory. Where such interspaces have taken place, they should at once be filled in with wood, or some other suitable material. The internal surface of the walls are best made of glazed bricks, or of cement, so that they can be at regular and frequent intervals washed or otherwise cleansed. The glazed-brick walls, as in the Delancey Hospital, Cheltenham, are attractive, and admit of easy cleansing; and Parian cement when put on, as at Weymouth, so as to present a hard, impervious, porcelain-like surface, is well adapted to the purposes of hospital wards. Ordinary brick or cement walls which are periodically lime-washed and then covered with a slightly-toned wash, are also neat and cleanly.

Architraves and cornices or other projections in connection with the walls have often, as at Weymouth, very properly been avoided, for they all tend more or less to harbour dust containing infective matter. For a similar reason flat ceilings are found preferable to any pitched roofs which need to be supported by projecting beams or rods.

The windows should be made for the purposes of ventilation as well as of admitting light, a point that has been overlooked in some of the more modern buildings, where I found that only small portions of the several windows were made to open. Having these objects in view, I am of opinion that a double-hung sliding-sash window is the one which is best adapted to the purposes of a hospital ward. These sashes are often surmounted by a third and smaller hinged-sash, fitted with side flaps, so that the air entering from without shall be directed towards the ceiling. The lower frame of each sash-window may also, as in the Berkhamstead rural and the Weymouth port hospitals, be with advantage made with a deep bottom rail so that the sash may be opened to allow of the entrance, in an upward direction, of air between the meeting rails, whilst the window remains closed above and below. With a view of securing a cheerful appearance, the bottom of the windows should not be more than about 3 feet above the floor level, and to ensure adequate movement of air in the upper parts of the ward, it has been found necessary that the top should not be less than some 6 inches, at the most, from the ceiling or the wall-plate, as the case may be. The best arrangement of windows is found to be that which provides for one between every two adjacent beds, and one near the angle of the ward beyond each end bed. Movement of air, and such ample light as tends to secure cleanliness, is thus ensured in those parts of the wards standing most in need of such requirements.

The amount of window surface which it is desirable to ensure for a ward is a subject which has received some attention. Having regard to cheerfulness, to adequate means of lighting and ventilation, as also to the maintenance of an equable and sufficient ward-temperature, it has appeared to me that in a well-constructed and efficiently warmed building the amount of window surface to cubic space should not vary much beyond the limits of 1 square foot to from 60 to 80 cubic feet; a proportion of about 1 square foot to every 70 cubic feet being, as a rule, the most advantageous. The experience obtained in the Children's Hospital at Pendlebury in this connection deserves special consideration, for, due regard being had to ventilation, the failure to maintain the ward air equably warm, and at the same time sweet, was to a great extent due to the excessive window surface, which there amounts to 1 square foot for every 35 cubic feet.

Windows in the opposite side walls, whilst affording the principal means of ward-ventilation, and constituting indeed the only effectual means by which thoroughly and in a short time to change the entire ward air, as, for example, when all the windows are opened on the occasion of cleaning out the wards, do not however suffice for this purpose. The space between the floor and the bottom of the patients' beds is found always to require independent ventilation, as by openings into the outer air situated just above the floor level, and each capable of being closed by means of a small sliding door, on one or other side of the ward, according as the weather may temporarily necessitate. Similar openings near the ceiling level are also, as a rule, provided. "Tobin" tubes have



occasionally been usefully resorted to. One or more vertical enclosed shafts passing from the ceiling through the roof are also, as a rule, requisite to carry off such air as is either too hot or no longer pure. But it must be regarded as certain that the provision of even excessive facilities for the escape of impure air, as by roof-shafts, should in no case be allowed to interfere with the provision of ample means for admitting fresh air into the wards, at a lower level.

Open fireplaces have, under most circumstances, been regarded as best adapted to ward purposes, and the additional means of ventilation they afford may be looked upon as especially useful in the case of wards occupied by patients suffering from infectious diseases. At least one such fireplace is found to be required for every 25 to 30 feet of ward length, and, where this limit is approached, those fireplaces which are provided with an air-chamber behind, by means of which warmed air from outside is passed into the ward, are, as a rule, used, because of the additional facilities they afford for maintaining a sufficient and equable temperature. Where wards exceed 30 feet in length stoves occupying a position in the central line of the ward, and having an open fireplace both in front and behind, or similarly situated closed stoves so made as to throw warmed air into the wards, are mostly used to maintain a fairly equable and a sufficient ward-temperature. Apparatus for combined warming and ventilation was only met with in one instance; it is referred to in connection with the Children's Hospital at Pendlebury, near Manchester.

The ward-space which should be allotted to each patient is a matter of first importance in a hospital where the patients are themselves centres of infection. In the Board's Hospital Memorandum it is stated that the ward-space for each patient should approach, as nearly as circumstances allow, to 2,000 cubic feet and 144 square feet of floor-space. In most of the modern hospitals visited this amount of ward-space was nearly or quite reached; in a few instances it was somewhat exceeded; and, with one exception, I have found no reason to suggest that it should be exceeded. The exception relates to wards containing smallpox patients. In such wards a larger space between the beds seems indicated than is necessary for other patients, especially when many severe cases are under treatment. Under such circumstances it has been found difficult, even when the means of ventilation appeared ample, to keep the air in all parts of the wards quite sweet.

I am disposed to regard a standard of floor-space as necessary to be appointed quite independently of the standard of cubic space, and I should not consider a material excess beyond the required 2,000 cubic feet per bed as compensating for a material shortcoming in the required 144 square feet of floor-space; nor yet should I regard a more ample floor-space as compensating for an insufficient cubic space. In other words, it appears to me that the height ought habitually to be about 14 feet in wards that are intended to have rows of beds on their two opposite sides, or if it be more than 14 feet, the space above that height should not be taken into account in reckoning the cubic space.

The question as to the maximum of beds which should be allowed in any one ward devoted to infectious cases was borne in mind during the inquiry, but where large wards were met with they either lacked the adequate ward-space per patient, or they had not for some considerable time been in full use. Hence no experience on this point was available.

On several occasions the question arose whether children, whilst in a hospital for infectious diseases, needed the same amount of ward-space as is deemed necessary for adults, and it has appeared to me that the subject called for consideration quite apart from the more general one as to the air-space which should be allotted to children in dwelling-houses, or in general hospitals. The circumstances, indeed, are not analogous. Having regard to the general experience acquired, I am of opinion that if any reduction in ward-space is made in the case of children, the reduction should be but small, and that in no case should the space for a child in an infectious hospital be less than three-fourths of that which is deemed necessary for an adult.

In connection with each ward there must be one or more water-closets, or dry-closets, and a ward-sink. In all well-constructed hospitals both these apartments are contained in a building projecting from the main pavilion, being separated from the ward itself by means of a lobby, provided with a door leading into the ward, and having means of cross-ventilation by openings in its two opposite side walls. As a rule, windows made to open are relied on to secure this cross-ventilation, but they are, except in very warm weather, nearly always kept shut, and hence measures should in every hospital be adopted to ensure that this cross-current of air shall not be stopped by any action on the part of patients or nurses. This can be effected in several ways, as by the substitution of a fixed louver, for a part of or for the whole of one of the upper panes of glass. The closets and sinks may conveniently be placed side by side with doors facing the door leading from the lobby into the ward. The partition above the closet and sink doors should rise to the ceiling so as to shut these offices entirely off from the lobby; whereas the partitions separating them from each other should not be more than about 8 feet high, so that, by means of windows placed in the opposite side walls of the projecting building, an independent cross-current of air may be secured through them.

Where water-closets are used both the apparatus known as a "container," as also the "D trap," have in modern hospitals been carefully avoided, as tending to retain infection and to cause nuisance. Wherever any form of dry closet is in use, it is fitted with a movable receptacle, which needs to be emptied and cleansed at least once every day, the removal being effected through a doorway from without; this form of closet also requires to be subjected to frequent inspection, and an ample supply of the dry material used should be available for application. Dry earth and charcoal have both been found to answer this purpose. Ward-sinks require to be provided with means of flushing, and having regard to their use for ward slops, &c., water drawn from the taps with which they are fitted should not be resorted to for domestic or other allied purposes.

A separate bath-room is provided in most hospitals. If the bath be a fixed one, it is found expedient that the head alone should be fitted in contact with any wall, both sides being left free, in order that attendants may have easy access to the patient using it. A movable bath is, however, as a rule, found necessary as well as a fixed one, especially in scarlet-fever wards, where bathing often forms an important part of the treatment adopted. One movable bath at times serves all the requirements of a small pavilion, and in some of the smaller hospitals, where no separate bath-room has been provided, the bath is made to stand in a lobby over a sink, to which hot and cold water are laid on, and over which it can be emptied. Bathing in the wards is, however, not as a rule desirable, except when the circumstances of the patient render it necessary.

In connection with each ward-pavilion an entrance lobby and certain administrative apartments have in nearly all cases been provided. In the one-storeyed pavilions these occupy, as a rule, a central position, and the minimum they consist of is (1) a nurse's room fitted with fixed windows, commanding a view of either ward; (2) a room in which to store such food and other articles as are in constant use; and (3) a linen store. Where no additional rooms are provided, the nurse's room is often fitted as a ward-kitchen, in which articles, such as beef-tea, &c., can be cooked or kept warm, and it is also provided with a scullery sink, an arrangement which is the less objectionable because nurses should not, unless under very occasional and exceptional circumstances, sleep in the rooms adjoining the wards. In the two-storeyed pavilions similar apartments occupy that end of the ward which adjoins the entrance lobby, and in which the staircase is fixed.

## THE BIRKENHEAD TOWN HALL COMPETITION.

A MEETING of the Birkenhead Town Council was held on the 6th inst., the Mayor (Mr. W. Laird) presiding.

A report was read from Mr. Charles Barry, architect, London, who recommended that the author of the designs bearing the motto "Mersey" should receive the appointment of architect to the Corporation for the proposed new town hall. The committee recommended the Council (Mr. Craven dissenting) to select and approve, subject to the conditions of the preliminary and final competitions, the designs submitted under the motto of "Mersey."

It was agreed to take a resolution on the subject of a site for the hall before confirming or otherwise the minutes of the committee.

Mr. Craven then moved as follows:—"That the resolution passed at the meeting of the General Purposes Committee held on the 24th October, 1879, recommending the site in Hamilton Square as suitable for the erection of a town hall and municipal offices, and the resolution passed at the meeting of the Town Council held on October 31, 1879, confirming the same; also so much of the resolution of the General Purposes Committee passed at a meeting held on September 26, 1881, and the resolution passed by the Council on October 12, 1881, confirming the same, and with reference to the Hamilton Square site, be rescinded or varied in order that the following resolution may be passed:—"That as the site previously fixed upon for the town hall is neither suitable nor large enough for a building of such bold and lofty proportions as the design approved of by the General Purposes Committee, and also that, since the site was decided upon, her Majesty has been graciously pleased to grant to the borough a Court of Quarter Session, thereby necessitating the building of a sessions house, the General Purposes Committee be requested to reconsider the question of site, with the view of combining the sessions house with the town hall, and erecting those buildings in the middle of Hamilton Square, provided the owners are willing to permit it free of cost." In supporting the motion, Mr. Craven stated that its adoption did not bind the Council to anything at all; they would be as free after passing it as before. But it would have the effect of bringing the subject before the General Purposes Committee, who could quietly go into the advantages and disadvantages of the different sites, and then report to the Council. The last time the matter was under discussion the only objection he remembered being raised to the Hamilton Square site—which he advocated at that time—was that a building in the middle of the square would be too costly. Since



that time they had got plans, out of which they had chosen a design the carrying out of which would cost 42,000*l*. The question of cost was therefore settled, and now he was prepared to advocate that the design chosen should be built in the centre of the square. With some slight alterations in the plans the building would be an ornament to the square. The design fixed upon was too bold and massive for the site where it was proposed to build the hall, and its general effect would be lost, and, seeing they intended to spend so much money on it, he contended that it should be put where it could be seen. If the town hall proper could be put in the middle of the square, then the site which they had already fixed upon would be at liberty, and they would be able to build upon it a new sessions house and magistrates' court, which they would very soon be compelled to do; whereas, if they had to buy a site for these buildings, it would entail an extra expenditure of 10,000*l*. or 12,000*l*. The town was a prosperous and healthy one, and as they had got money to spend they ought to do it. He had reason to believe that the majority of the owners of property in Hamilton Square would not throw any difficulty in their way in granting the land free of cost.

Mr. Shaw, in seconding the motion, said the necessity for building a sessions house, magistrates' court, &c., had been forced upon them a few months ago, and if they built the town hall on the site fixed upon, they would have to go into Chester Street, bridging over Albion Street, to find room for these additional buildings. That would entail an outlay of 3*l*. per superficial square yard for the extra ground required, which would amount altogether to 10,000*l*. or 12,000*l*. That amount would be saved by erecting the town hall in the middle of Hamilton Square, and leaving the other site for these other buildings.

Mr. Paterson thought the acceptance of the motion would put them in rather a peculiar position with the gentlemen who had sent in designs, as they might have to change them.

Alderman Harris said that to tell the Council that such plans as had been prepared for the original site would be suitable for the middle of Hamilton Square was too much for their credulity. If they were to satisfy the owners of property in the square they must have four frontages to the hall, which would entail an enormous cost. He would like to know if the ratepayers were prepared to spend perhaps 100,000*l*. for a building with four frontages. The question of the sessions house was under consideration the first time the town hall site was before the Council, and on that occasion he himself pointed out to the Council how the rooms in the municipal offices could be utilised. Was a new building really required for the quarter sessions? He had been told that the quarter sessions would sit perhaps two days every quarter, and were they going to spend 10,000*l*. to erect a building to accommodate these? Surely some place could be found in the borough for them. Supposing they decided to build the hall in the centre of the square, he was prepared to say that ten years would not see it finished, they would have so many unlooked-for difficulties to contend with.

Alderman Willmer, in supporting the resolution, contended that it would be foolish to spend 10,000*l*. or 12,000*l*. in purchasing land on which to build a sessions house, if they could build the hall in the centre of the square, and use the site already fixed for it for the sessions house.

The Council divided, when the motion was carried by 21 votes to 9.

On the motion of Alderman Mills, the following resolution was then agreed to:—"That the design for the new town hall submitted under the motto 'Mersey' be approved, subject to the conditions of the preliminary and final competitions, and the terms of the resolution now passed." He further moved, in accordance with the recommendation of the General Purposes Committee, that the sum of 75*l*. be given to each of the five architects who had sent in final designs, and that a vote of thanks be passed to the gentlemen who had taken part in the competition. He announced the names of the five most successful competitors, with the order of merit, to be as follows:—First, "Mersey," Mr. C. O. Ellison, 62 Dale Street, Liverpool; second, "St. Werburgh," Mr. Henry Hall, 90 Doughty Street, Mecklenburgh Square, London, and Mr. John H. Eastwood, 16 Red Lion Square, London; third, "Fide," Mr. E. P. Wright, 26 Well Street, Plymouth, and Mr. G. H. Rawcliffe, 8 Ormerod Street, Burnley; fourth, "Thorough," Mr. John Sullivan, 1 Furnival's Inn, Holborn, London; and fifth, "Fortunio," Mr. Tyson Gooch, 29 Guilford Street, London.

The motion was carried unanimously, after which the proceedings of the General Purposes Committee were confirmed.

**Truro Cathedral.**—At a meeting of the executive committee of the new cathedral at Truro, held at Penzance on Wednesday, it was reported that the subscriptions promised and paid up to the present time amounted to 54,000*l*. The sum spent on the work accomplished and on work ordered is 57,000*l*. Mr. Pearson, the architect, advised that the building of the north transept should be at once proceeded with. This will entail an additional outlay of over 5,000*l*. to complete the first portion of the cathedral, including the north transept and the south porch.

## SCHOOL OF ART WOOD-CARVING.

THE School of Art Wood-carving, which is domiciled at the Royal Albert Hall, South Kensington, and is in connection with the City and Guilds of London Institute for the Advancement of Technical Education, has reopened after the usual summer vacation, and we are requested to state that free studentships in both the day classes and the evening classes are at present vacant. These studentships are maintained out of funds provided by the City and Guilds of London Institute for the Advancement of Technical Education. The school is open to amateurs as well as to those who intend making wood-carving a profession. To those who are unable to attend the classes, information can be given by letter and examples supplied. All necessary information, with forms of application and prospectuses of the school, may be obtained by personal application, or by letter addressed to the Manager, School of Art Wood-carving, Royal Albert Hall, Kensington, S.W.

## THE NORTH AND SOUTH LONDON COMMUNICATIONS PROJECT.

AN exhaustive report upon the communications between the north and south sides of the Thames below London Bridge has been prepared for the Metropolitan Board of Works by the engineer, Sir J. W. Bazalgette, C.B. He informs the Board that London proper extends about six miles, as the crow flies, westwards, and about four miles eastward of London Bridge. About three-fifths of the population live west, and the remaining two-fifths, or above 1½ million, east of that bridge, exclusive of that portion of the City which extends to the east of London Bridge as far as the Tower. Upon the western six miles are twelve road bridges with footpaths and one footbridge, of which nine have since 1877 been rendered free of toll, at an expenditure of 1,341,036*l*. by the Metropolitan Board of Work; but the cost of their construction was about 1½ million. In addition to this an expenditure of about 950,000*l*. will be incurred in rebuilding, strengthening, and improving some of them, and the cost of building London, Southwark, Blackfriars, and Westminster Bridges amounted, as nearly as can be ascertained, to 3¼ millions, making altogether a total expenditure of about 6½ millions for the benefit mainly of the central and western districts of the metropolis. But for the four miles east of London Bridge, and thence to the mouth of the Thames, all vehicular and pedestrian traffic between north and south is completely severed by the river. The east end of London represents its trade and commerce, and its population is greater than the combined population of Liverpool, Manchester, Salford, and Birmingham. Thus the population east of London Bridge on the north side of the river is 894,000, while the combined population of Manchester, Salford, and Birmingham is 918,000; and the population east of London Bridge on the south side is 655,000, that of Liverpool being 552,000. If Liverpool were situated on one side and Manchester and Birmingham on the other side of a river, the importance of forming a direct means of communication between them would not be questioned; and the eastern district of London has, moreover, contributed largely towards the purchase of the toll-bridges of the western district, and has now a very strong claim for consideration.

The necessity for additional means of communication has been generally admitted in all the reports of public authorities, and it remains, therefore, to consider, first, what positions are best suited and are available to meet the requirements of the district to be served. Sir Joseph Bazalgette says that to provide additional means of crossing upon the extreme western limit of the district and close to London Bridge would afford the 'minimum amount of additional accommodation that could be suggested. It would, moreover, perpetuate the existing evil of blocking the thoroughfares of the City by bringing the eastern traffic through them. Little Tower Hill is about 3,000 feet east of London Bridge, the approaches to it are uninterrupted by the docks or their entrances, and the leading lines of thoroughfare converge towards it. The advantages of its position over any higher point of crossing are so obvious that it has been repeatedly selected by the Corporation of London and the Metropolitan Board of Works from time to time when the subject has been under their consideration. The traffic would also be carried over the river here by an independent route, without going through the City. From Little Tower Hill to Nightingale Lane, a distance of three-fourths of a mile below London Bridge, the St. Katharine's Docks prevent the formation of uninterrupted approaches to the river; and the improvement of approaches at Nightingale Lane would seriously interfere with the dock property and be very costly, while they would be less convenient than the approaches to Little Tower Hill. From Nightingale Lane to Shadwell, at a point about two miles below London Bridge, the London Docks similarly intercept the free communication with the river-side. But a tunnel, with suitable approaches, could be formed at Shadwell. From Shadwell to a point six miles below London Bridge the Surrey Commercial Docks, the West India Docks, and the Millwall Docks, in like manner, cut off the free and uninterrupted approaches to the river. A tunnel east of the Isle of Dogs



would connect Greenwich and Woolwich with the extreme north-east of London. Three points of crossing are therefore available for the eastern district—1. Between Little Tower Hill and Bermondsey. 2. Between Shadwell and Rotherhithe. 3. Between Blackwall and Greenwich and Woolwich.

As to the means of crossing, while there are obvious objections to tunnels as compared with bridges, the former are the only practicable means for crossing at Shadwell and Blackwall, having regard to the levels of the approaches, their position with reference to the dock entrances, and to the width of the river. The cost of the Blackwall tunnel, with its approaches, would be about 1,250,000*l.*, and of the Shadwell tunnel about 2,000,000*l.* The mode of crossing at the Tower, however, has been the subject of much discussion. The following methods have been suggested:—1. A low-level bridge, with an uninterrupted roadway. 2. A low-level bridge, with an opening for the passage of vessels through it. 3. A high-level bridge, with inclined road approaches. 4. A high-level bridge, with hydraulic lifts. 5. A tunnel under the river, with inclined approaches. 6. A tunnel, with hydraulic lifts. 7. A ferry. Sir Joseph Bazalgette has prepared designs for each of these suggestions where they had not been previously prepared, and has formed approximate estimates of the cost. After weighing the merits and demerits of each plan, he arrives at the conclusion that a low-level bridge over the river would be the best for the road traffic, but, including compensations, it would cost 3,000,000*l.*, would incur a large amount of opposition, and would involve a change in the character of the business transacted at the wharves. The engineer of the Metropolitan Board of Works is of opinion that the high-level bridge, crossing the river in one span, with a clear headway of 85 feet about Trinity high water, and with straight, inclined approaches, would cost less by about 1,000,000*l.*, and would not interrupt the navigation. It would form a very convenient road communication, and it appears, on the whole, to be best suited to the requirements of the locality, and would, when completed, give the greatest amount of satisfaction. Its cost would be about 2,000,000*l.*, and, after the most careful consideration Sir Joseph Bazalgette recommends its adoption in preference to any of the other projects for crossing the river at this point. Ferries might be established, at comparatively small cost, to accommodate the local traffic at intermediate points where the approaches would not justify the construction of a permanent crossing, although their passage would be frequently interrupted; or they might be established at Shadwell and Blackwall pending the construction of those tunnels. It would, however, be a serious mistake and contrary to all experience to assume that ferries, however well organised, could ever be made an efficient substitute for an uninterrupted line of communication by means of a bridge. The ferry system has reached its highest stage of development in New York, and a vast number of large boats convey the road and rail traffic across the East river and the Hudson river to Brooklyn, Long Island, Jersey City, and Hoboken. Nevertheless, after more than fifty years' experience, it has been found impossible to meet the legitimate demands of public convenience by means of ferries, and at the present time a high-level bridge having double the span of the proposed Tower bridge is on the point of completion across the East river at New York, and another one to Long Island is about to be commenced; while on the other side of the city, a tunnel, offering far greater difficulties than the proposed tunnels at Shadwell and Blackwall, is being carried under the Hudson river. As it is not unfrequently contended that the gradients of a high-level bridge would neutralise the advantages of an uninterrupted roadway, and make ferries preferable, Sir Joseph Bazalgette appends for comparison the total ascents and steepness of the gradients on the proposed bridge, and on the two New York bridges already referred to.

	Ascents.		Mean Gradients.
	North Side.	South Side.	
Tower bridge . . .	57	92	1 in 40
East river bridge . . .	107	83	1 in 31
Long Island bridge . . .	100	132	1 in 25

The East river bridge has one span of 1,600 feet, and two of 930 feet. The Long Island bridge has one span of 734 feet, and one of 618 feet, with long viaduct approaches in both instances. There is nothing exceptional, therefore, in the size of the proposed Tower bridge, while as regards cost, the latter is far cheaper than the New York works.

Assuming that it should be determined to construct the high-level bridge at the Tower and one tunnel at Shadwell and another at Blackwall at an aggregate cost of 5,200,000*l.*, and that this sum could be borrowed at 3½ per cent. and be paid off in sixty years, the annual expenditure would amount to 207,660*l.*, or 570*l.* per diem. This, at the present rateable value, represents a rate of about 1½*d.* in the pound. But there are other sources from which funds in reduction of this rate might fairly be raised. The Coal and Wine Dues, which expire in July 1888, produce 285,000*l.* per annum, or more than the amount required, and no work of greater

utility or benefit to the metropolis could be urged upon Parliament in order to justify the further extension of these dues. Sir Joseph Bazalgette estimated that from a ¼*d.* toll on the foot passengers and 1*d.* on the vehicles 616*l.* per day would be produced; or more than would be required to pay off the capital and interest on 5,200,000*l.*

## ROMAN BATHS AT BATH.

M R. C. E. DAVIS, F.S.A., the city architect of Bath, writes as follows:—

The Roman baths of Bath that have during the last five years been partially exposed to view are the most remarkable relics of the occupation of Britain by the Romans hitherto discovered. The hot springs themselves were found to be protected by an octagonal wall built of massive blocks of stone and cased on the inside with lead of an average weight of 38 lbs. to the foot (exceeding half an inch thick). A great deal of this lead had been broken down by the falling in of the columns and roofs; indeed the whole area of the springs was filled in with Roman tiles and masonry, sand, and organic remains, on which rested the mediæval floor of the bath known as the King's Bath. Excavations have been made beneath the Pump Room opening out the Roman drains, which are now again utilised; these run among masonry of almost Cyclopean character, which circumstances, pecuniary and otherwise, have rendered it impossible to thoroughly explore.

The greatest discovery has been that of a large bath 81 feet in length, by 38 feet 10 inches in width, with steps complete on its four sides, floored with blocks of masonry, on which still remains the original coating of lead. This bath was supplied by the hot mineral water, and had a hatch or sluice of bronze (now deposited in the Pump Room) for conveniently emptying it. The bath is in the centre of a large hall with *scholæ* all round, in length (it is anticipated) 110 feet, by an ascertained width of 68 feet 6 inches. The excavation of this great hall is now in progress. Large buildings have been acquired and removed for the purpose, but unfortunately the offices of the Poor Law Board, which occupy a portion of the site, remain, having been underpinned and arched under. As the floor of the bath is at a depth of 20 feet below the neighbouring streets, the existence of this building does not prevent the opening out of the bath, although it interferes with the view and prevents the completion of the excavations.

Too much of your space would be occupied were I to attempt to particularise the construction of this great hall, but I may be permitted to say that we have excavated more than sufficient to completely restore the buildings, the masonry standing *in situ* of a height exceeding 10 feet from the floor of the bath; indeed, as at Wroxeter, one of the walls has stood exposed to view little less than 1800 years. The hall consists of three aisles, the centre being the width of the bath, vaulted by a barrel-vault. This vault sprang from an arcade of clustered pilasters, giving seven arches on either side. The pilasters, 2 feet in diameter, of solid block, stand on Attic bases and plain pedestals, the side aisles or *scholæ* were arched and groined, with attached pilasters along the walls and three recesses (*exedrae* or *stibadia*) 15 feet wide, on each side the hall, two being semicircular, and the third and central square. In the centre bay of the northern arcade is a defaced piece of sculpture, through which ran the water. Underneath the sculpture is a recess in the steps marking the position of a large sarcophagus (now lost), into which the water was first poured and so overflowed into the bath. The entrance to the great bath is at the western end, by a doorway from a large hall, the precise extent of which is unknown, although I believe I saw its western wall during some excavations I made in 1869. Very fine fragments of architectural sculpture have been obtained, and also pieces of later and more debased character, but the remains generally far surpass anything found in Britain.

In 1754 a large bath, but much smaller than this one, was discovered and destroyed, and were excavations still further pursued there is reason to believe that what has hitherto been discovered is only a fractional portion of what is still buried beneath more modern buildings.

In the progress of the excavations we found a metal mask somewhat similar to those of Dr. Schliemann, several patens and ewers, also of metal, and an engraved tablet, read in one way by Professor Sayce, and in another by Professor Zangemeister of Heidelberg (the greatest European authority on Roman inscriptions); also another tablet in cursive character, not yet satisfactorily deciphered, a large number of coins, bones, and pottery, and last, not least, a teal's egg, evidently in the position laid by the bird against one of the ruined pilasters of the bath in the decayed vegetation that covered the *scholæ*, satisfactorily proving that the city of *Aquæ Solis* (Bath) continued for a lengthened period a deserted ruin after its destruction A.D. 577 by the Saxons.

During the last twelvemonths the Bath Antiquities Committee have been continuing the excavations commenced by the Corporation, liberally assisted by the Society of Antiquaries and private subscribers; but, unless further funds are forthcoming, this truly great and almost national work will have to be discontinued, and the undiscovered buildings remain for a future generation to explore.



## NOTES AND COMMENTS.

MR. HAWKSLEY has prepared a report on an additional water supply for Plymouth. The population of the town is about 80,000, and the consumption is 40 gallons per head per diem. When devising Parliamentary additions to a gravitation work it is usual to ask for powers to provide for a population at least one-half larger than the existing population, and consequently a daily demand of 5,000,000 gallons must be met in the driest and most exigent season of the year. The river Meavy is not equal to the supply of this quantity, and a new reservoir has to be constructed to supplement the daily yield of the river. Mr. HAWKSLEY accordingly proposes the construction of a reservoir at the Weir Head or the Harter. The former is preferred as a site by Mr. HAWKSLEY, but the land is valuable and not easy to acquire. He therefore recommends application to Parliament for power to secure the Harter site. In engineering respects it is a very good one. It admits of the construction of a reservoir of the necessary capacity, without making the embankment of unusual height or unusual strength; and all necessary materials for the earthworks can be obtained on the ground, except clay, of which the valley of the Meavy is extremely deficient. Excellent granite for the masonry works is found on the spot.

It has been announced that the Paris International Exhibition of 1878 was financially a failure. The expenses have exceeded 55 million of francs, a sum which is about 20 millions beyond the original estimate. "Personal expenses," for which 1,713,000 francs were supposed to be sufficient, amount to 3,768,000 francs. The artificial gardens cost two million francs, and the extra works cost nearly six millions instead of one million. The receipts were only about 24 million francs.

THE Prix Jean Leclaire, founded in favour of those young architect students of the Académie des Beaux-Arts who have most distinguished themselves during the year, has been divided between M. QUATESONS, pupil of M. PASCAL, and M. YVON, pupil of M. ANDRÉ. As M. QUATESONS has also carried off the Prix Abel Blouet, awarded to the first pupil of the school, he has commenced his career brilliantly.

It may not be known to all travellers through Milan that the city has acquired in the Museo Poldi in the Via Giardano an addition to its attractions. This museum, established under the will of the late Cavaliere GIAN POLDI-PEZZOLI, is a treasury of works of art in various forms—pictures, carved furniture, tapestry, armour, glass, bronzes, &c.; and in the truthful words of the official account of the museum, "whichever class of objects one examines one finds there nothing which does not possess great value for the intrinsic merit of the work, or for the antiquity or rarity of the objects." Among the 195 choice pictures of great Italian painters—especially of the school of LEONARDO—is LUINI's celebrated picture of the *Betrothal of St. Catherine*, from the Litta Collection.

THE Prefect of the Seine estimates the cost of keeping in good order and repair the streets and sidewalks of Paris during the year 1883 at 10,170,000 francs (406,800*l.*). This sum includes the cost of relaying roads, paving, asphaltting, &c., where required. The total area of streets and sidewalks paved with stone is calculated to amount on January 1 next to 6,234,200 square mètres, the number of persons employed permanently being about 400. The sum entered in the 1883 Municipal Budget on account of stone paving is nearly 5 million francs (200,000*l.*), or about 68½ centimes per square mètre. The repairs are of two kinds—(1) taking up and replacing worn-out paving stones by new ones; (2) taking up, redressing, and relaying the existing stones. The former is done by firms, who contract to maintain a certain area in repair at so much per annum, while the redressing operations are carried out by squads of paviors, comprising a head pavior (*chef de brigade*), a companion ditto, a dresser, and two ordinary labourers for taking up, replacing the stones, &c. The number of these squads is 78, each having its appointed area to look after. In the second category come the macadamised roads and paths, the area of which has of late years greatly diminished. They still, however, cover 1,817,500 square mètres, kept up at a cost of 4,600,000 francs, or 2 francs 54 centimes per square mètre per annum. The repairs on

these roads, &c., are effected by a separate corps of cantonniers, organised in the same way as those employed on all the high roads of the country. The materials used are flints, tufa, and porphyry, from Voutré, in the Department of the Mayenne; the last, which costs no less than 26 francs per mètre, being reserved for those thoroughfares where the traffic is greatest. Asphalte is laid over an area of 316,260 mètres, and the cost of keeping it up is 1 franc 39 centimes per square mètre. The repairs are executed under contract, the contractors being obliged each year to relay entirely one-fifteenth of the surface under their care.

SIR HENRY HUNT, the arbitrator appointed by the Home Secretary, has, after three days' sitting, given his award in the matters in dispute between the Metropolitan Board of Works and the proprietors of Drury Lane Theatre. The principal point involved was the building of a new brick proscenium wall. The arbitrator has confirmed this part of the requisition. The Board were also desirous of continuing the Duke of BEDFORD's private staircase on the north side of the theatre in order to provide an additional means of exit from the upper gallery. This requirement has not been confirmed, but Sir HENRY HUNT has directed a short flight of steps to be constructed leading into the lower gallery staircase, next Russell Street. The other requirements of the Metropolitan Board of Works, relating to the placing of handrails to the staircases and so forth, were agreed to by the proprietors, on the recommendation of their architect, Mr. C. J. PHIPPS, F.S.A. The cost of the award in this case (which has to be paid by the Board) is 136*l.* 4*s.* 10*d.*; the costs of the proprietors of the theatre are stated to be upwards of 500*l.* If to these amounts be added the costs incurred by the Board, the total cost of the inquiry may be assumed to be nearly 1,200*l.*

M. DU SOMMERARD, the Director of the Musée de Cluny, has purchased for his collection the beautiful tapestries *de haute-lisse* which formerly hung in the famous Château de Boussac. The new acquisitions will appear on the walls of a new room, which is to be exclusively devoted to these and cognate specimens of old decorative hangings.

ON Monday next the classes of Ateliers of the Ecole des Beaux-Arts will be re-opened, as well as the magnificent library of the establishment. Strangers to the school are allowed to enter and work in this library without any special permission on the first occasion of presenting themselves; but should they wish to continue their visits, they must procure a regular card of admission, which, however, is readily accorded, especially to foreign art students and amateurs.

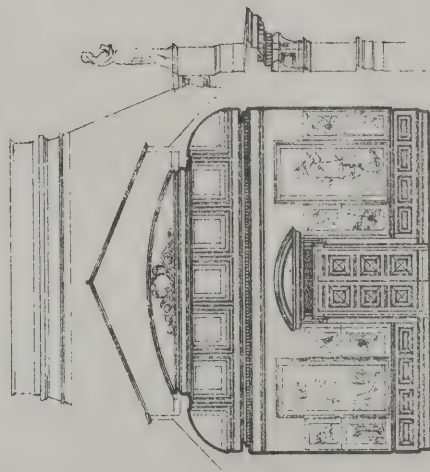
MESSRS. WELLS & Co., the old-established ironfounders and art metal workers, of the Commercial Ironworks, Shore-ditch, have in consequence of the great increase of their business in England and the Colonies converted the firm into a limited liability company with a capital of 100,000*l.* It will be seen from the prospectus that exceptional advantages are offered to shareholders. The security of the undertaking is guaranteed by the fact that the vendors leave the whole of their own capital in the concern, and decline to receive profit in any form until a dividend of at least 6 per cent. has been received by the ordinary shareholders.

THE Bank of France began on Monday the issue of its new 100 franc note, the designing and engraving of which have been entrusted to the most eminent artists of the country, and have taken several years in execution. The most striking feature about the new paper is its double "filigrane." That to the left is a head of CERES and that to the right a head of MERCURY; the one being visible only when the note is flat, the other by transparency, and both being so arranged that they cannot be damaged by the folding of the paper. These "filigranes" are covered by no printing, and appear on both sides of the note surrounded by a vignette border. On the face is a design representing draped figures of Agriculture and Navigation, while a group—MINERVA and FORTUNE—occupies the central portion of the back. Below each of the "filigranes" is the upright figure of a *genius* bearing a shield, upon which is inscribed the value of the note. The whole is printed in blue, as in the case of the other notes of the bank. Until further notice the new paper will circulate concurrently with the old.

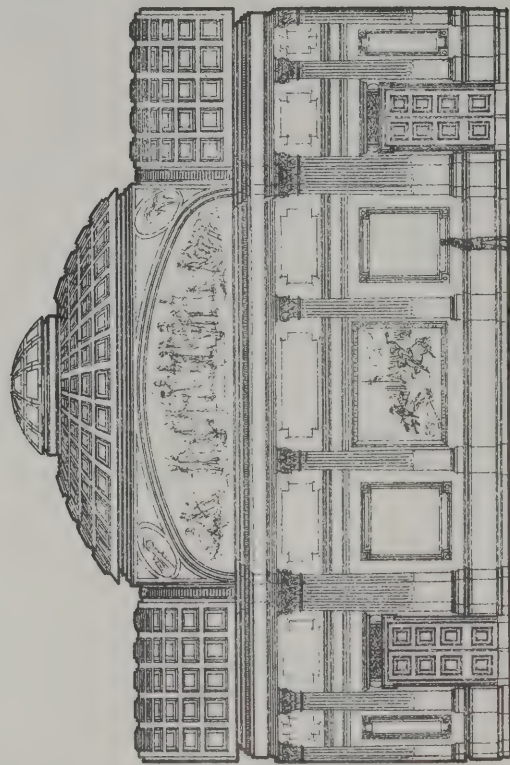
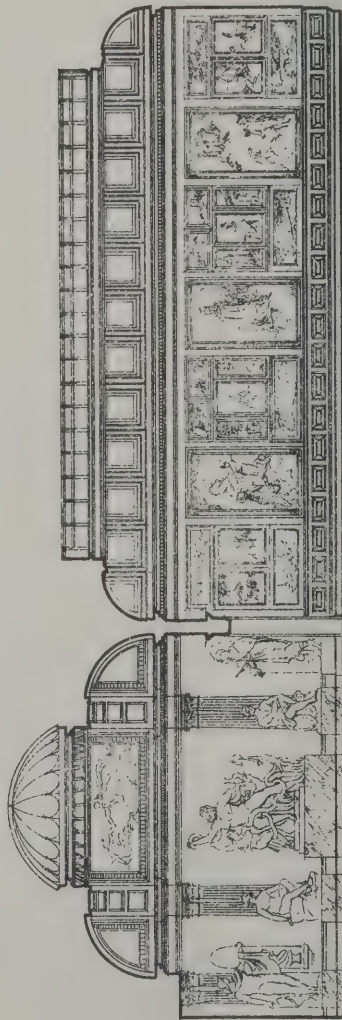




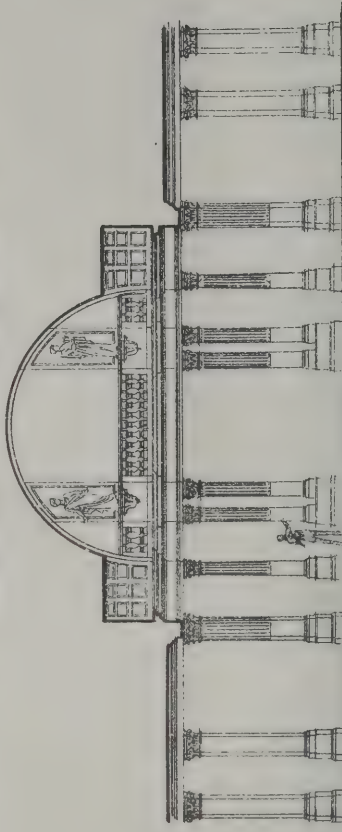




LONGITUDINAL AND TRANSVERSE SECTIONS THROUGH SALOONS AT ANGLE OF GEORGE STREET AND GEORGE SQUARE TO ILLUSTRATE THEIR CAPABILITIES AS PICTURE AND SCULPTURE GALLERIES (AS REFERRED TO IN THE REPORT)



— LONGITUDINAL SECTION THROUGH COUNCIL CHAMBER —



— SECTION THROUGH ENTRANCE HALL —

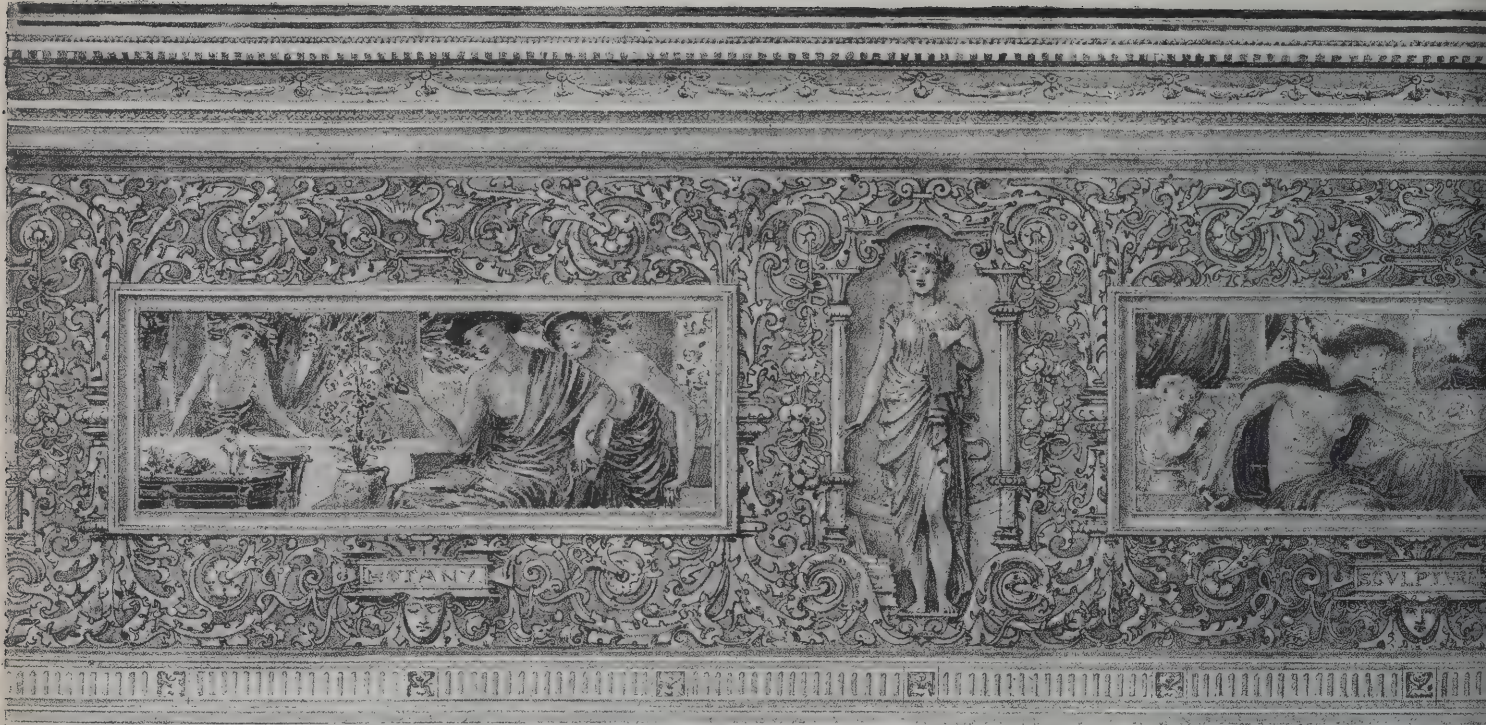
SUPPLEMENTARY SHEET OF SPECIAL SECTIONS.

DESIGN FOR THE GLASGOW MUNICIPAL BUILDINGS.  
(ONE OF THE FOUR DESIGNS SELECTED IN THE FINAL COMPETITION.)  
BY THOS WORTHINGTON, F.R.I.B.A. AND JOHN G. ELGOOD, A.R.I.B.A.









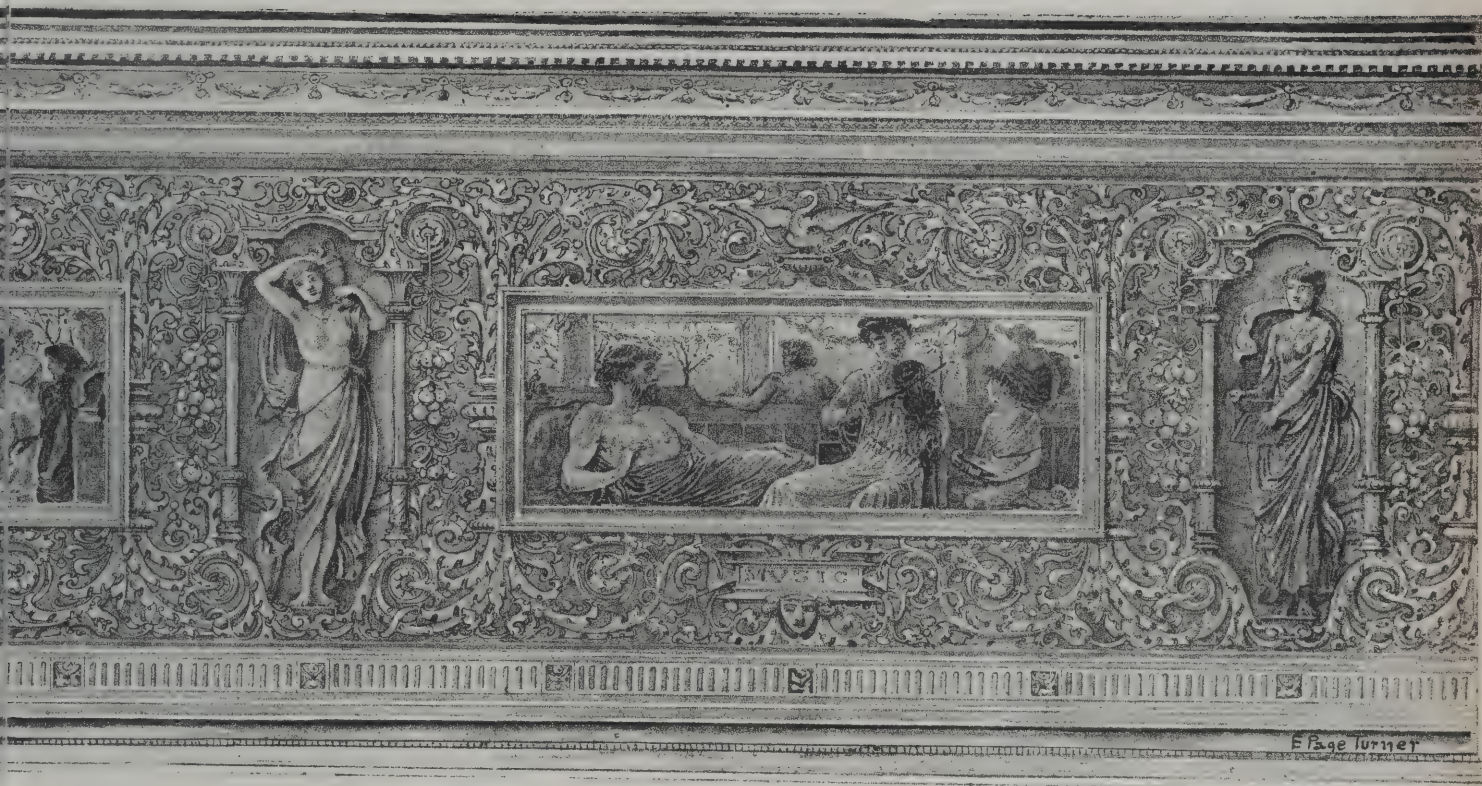
INK PHOTO

Sprague & Co 22, Martins Lane Cannon St EC

BOTANY, SCULPTURE  
PART OF THE  
DESIGNED



14<sup>th</sup> 1882.



E AND MUSIC.  
OF A FRIEZE  
E. PAGE TURNER.

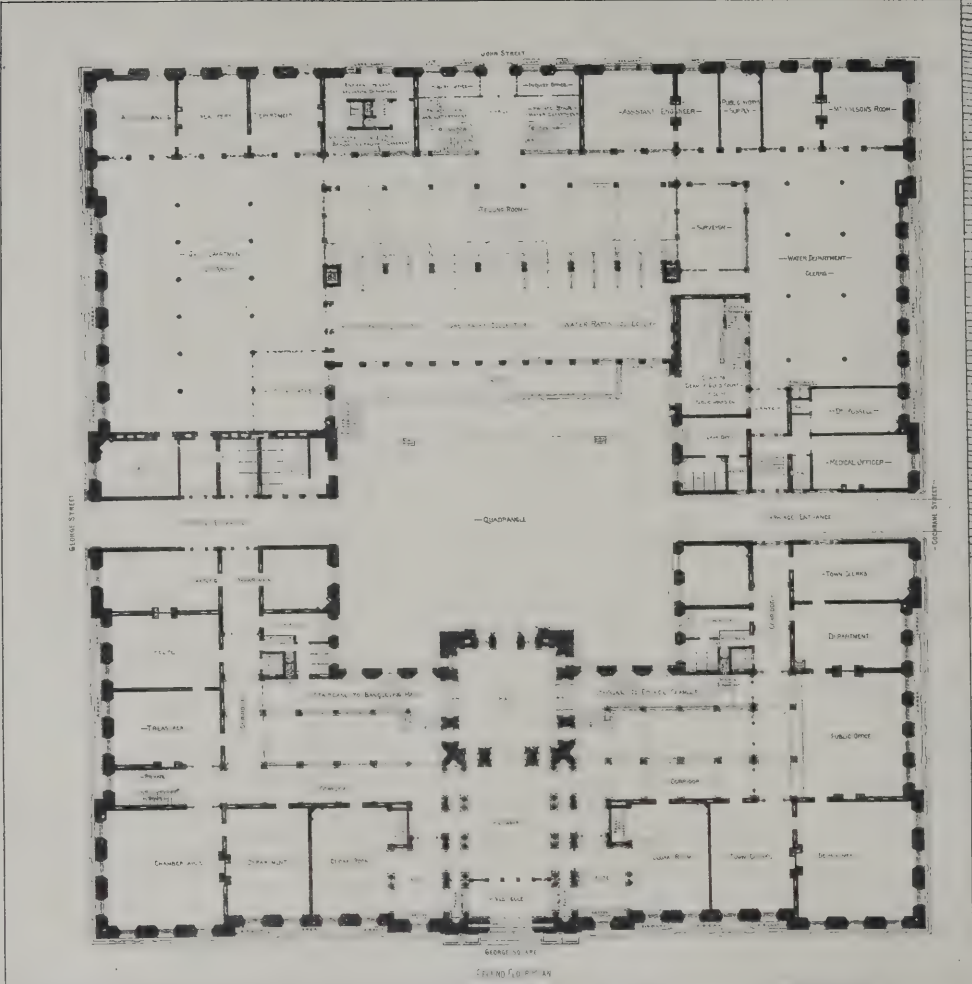






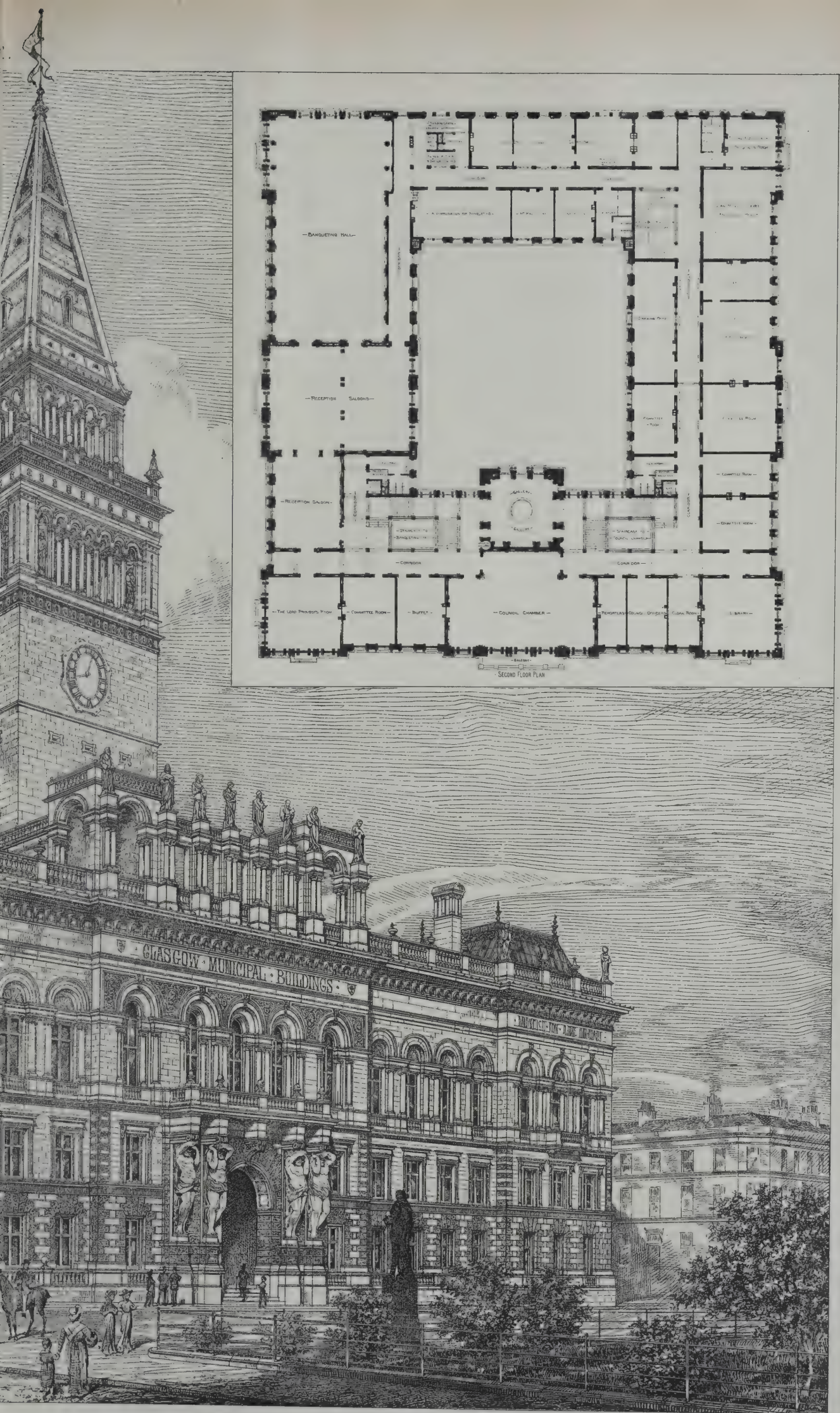






DESIGN FOR THE GLA  
(ONE OF THE FOUR DESIGNS)  
BY THOS WORTHINGTON, F.R.S.





MUNICIPAL BUILDINGS.  
(THE FINAL COMPETITION.)  
JOHN G. ELGOOD, A.R.I.B.A.

Spaugh & Co. 22, Martins Lane Cannon St. E.C.









SPRAGUE & CO 22, MARK LANE CANON ST EC

TOWER OF ALL SAINTS CHURCH, WALTON ON THE NAZE.  
HENRY STONE, ARCHT







## ILLUSTRATIONS.

## DESIGN FOR GLASGOW MUNICIPAL BUILDINGS.

THE design published this week was one of the premiated designs selected in the final competition, and is based mainly on the city architect's plan, it being understood that the arrangements and accommodation required had been under his consideration for several years, in conjunction with the other chief officials.

It did not appear desirable to the authors of this design to make the chief entrance from George Square into a carriage-way, it being impossible to preserve it clean and fresh, but there is a good access to the quadrangle from Cochrane Street and exit in George Street, the intention being for visitors in carriages to enter the building on the occasion of public receptions from the courtyard.

The distinguishing feature of this design is the arrangement of the saloons to serve as picture and sculpture galleries; one of the illustrations now given shows how this was proposed to be effected, also the internal appearance of the principal entrance and council chamber. Entrances are provided in John Street for the gas and water departments, and service of banqueting-hall, &c.; in the quadrangle for the office of public works and Dean of Guild, as well as minor entrances to the other departments. Considerable dignity is given to the main entrance by the arrangement adopted of a circular vault, the tower on each floor serving as a means of communication from each side of building, with an open well and balcony looking into the entrance loggia. The warming and ventilation, sanitary arrangements, &c., were all worked out by the authors, without external aid, having had considerable experience in similar matters on other large public buildings; and the lavatories and water-closets were all placed next the external walls, with ample provision for air supply, ventilation, flushing, and disconnection from drains. Separate smoke and ventilating shafts are provided for the various departments, under proper control in the basement, supplemented by hot-water pipes for the larger rooms, corridors, staircases, &c.; and the tower is utilised for extraction of vitiated air, also for storage of water, clock and chimes, alarm bell, and electric light.

Two lifts for passengers are provided for access to the principal rooms and saloons, and smaller hoists for coals and service in convenient positions, with tramways in basement all round; the construction of walls, floors, and roofs being fire-proof throughout.

The authors of this design are Messrs. THOS. WORTHINGTON, F.R.I.B.A., and JOHN G. ELGOOD, A.R.I.B.A., 110 King Street, Manchester.

## TOWER OF ALL SAINTS' CHURCH, WALTON-ON-THE-NAZE.

OUR illustration shows the western feature of the church, recently consecrated by the Bishop of St. Albans, which, when completed, will form a conspicuous landmark on the Eastern coast. At present, for want of funds, only about half the tower is built. The total height will be 80 feet. The style is Early Decorated, and the material brick, faced with Kentish rag, the dressings of Bath and Doulting stone.

Mr. HENRY STONE, of 31 John Street, Bedford Row, is the architect, and Messrs. EVERETT, of Colchester, the builders. The illustration is an ink-photo reproduction of a drawing which was exhibited at the Royal Academy.

## DESIGN FOR FRIEZE FOR BANQUETING-HALL.

THIS illustration is a reproduction by the ink-photo process from a design by Mr. E. PAGE TURNER, of 68 Newman Street, W., which was also exhibited at the Royal Academy. It shows a section of a scheme for the decoration of a public hall. The pictures would be representations of the arts and sciences, and painted in colours; the surrounding network of ornament to be painted in grey blue, including the upright figures, which are emblematical of trades and processes of manufacture. The entire work would be painted on canvas hung between wood mouldings, and 4 feet deep.

**Longsight.**—The memorial stone of a new church has been laid. The building is designed in Early English style, and will be 70 feet long by 36 feet wide, with north and south transepts, giving accommodation for 400 persons. The contractor for the work is Mr. L. C. Webster, of Brook Street, Chorlton-on-Medlock, and the architect, Mr. W. Telford Gunson, of Manchester.

## THE PRESENT CONDITION OF EPHEBUS.

THE remains of Ephesus were visited on September 23 by Mr. J. Russell Endean, who gives the following description of the state of the ruins:—

Emerging from the station we saw immediately on the left hand the standing ruined columns that supported the aqueduct which once supplied the city with water. Unlike the columns in Rome, which may still be seen in many places bearing the aqueduct, these columns have nothing but broken fragments of arches still attached to them. Hence we proceeded over very dusty roads and through maize fields to the Magnesian Gate, passing on the route many excavated and ruined tombs, broken sarcophagi, &c., with a vast amount of *débris* everywhere, covering Mount Prion on our right, the Tomb of Androcles, &c. In the Gymnasium some ruined columns and arches still testify to their former grandeur. Before reaching the Odeum Theatre we saw the tomb reported to be St. Luke's. This is in a greatly more ruinous condition than when last photographed, and, unless quickly protected, the remaining vestiges taken to prove its identity will rapidly disappear. The one sculptured marble slab now perfect is lying half prostrate on the rubbish beneath it, and an unlucky fall of a stone upon it would most probably break this beautiful slab to pieces.

The site of the Odeum is covered with *débris*, with large blocks of white marble, beautifully sculptured, lying scattered over its surface. The Theatre is in a similar state. On the way to the Stadium we passed over the site of the Gymnasium, over a road-way said to have been formerly the covered way of the market-place, fragments of the mosaic pavements lying beneath our feet. The Stadium is an extensive ruin, with parts of broken columns after the style of the Roman Forum still standing.

Now leaving Mount Prion on the right, we proceeded through fields of standing maize to the Temple of Diana, that temple described by Murray as "the most magnificent in the world." Here we had anticipated seeing some noble evidences still standing of its former grandeur, but we found nothing but the most absolute and complete ruin; the whole site was covered with nothing but rubbish and small broken fragments of marble, many pieces being proofs of the exquisite workmanship expended upon the temple; but of the original structure it may truly be said there is not left one stone standing upon another.

The Church of St. John, the Castle on the Hill, and the ruined mosques are gradually falling more and more into decay, and if they are to be preserved the effort to preserve them cannot too soon be made. Taking the site and surroundings of the city, for situation nothing can well be conceived more beautiful; but now the eye must rest upon the scene in order to realise how utter and absolute the ruin is of this once great centre of Asiatic splendour and magnificence. If the Christian world desire to preserve what is yet standing in Ephesus, it is of the first importance that prompt steps should be taken in order to protect what is yet left so worthy of protection, or otherwise the little that remains will sooner or later be removed or destroyed.

## THE LATE MR. JOHN BUNNEY.

IN a letter from Venice, the Rev. T. W. May Lund writes:—  
"Upon my arrival in Venice on Tuesday my boatman told me on the way from the station of the death of Mr. John Bunney, adding this significant comment, 'All Venice is sorry.' Venice has reason to be sorry, not merely because Mr. Bunney took so keen an interest in its art treasures, nor yet because for three years he was a familiar feature in the square of St. Mark, as he sat there daily to paint his exact copy of the façade of the church, which can now only be seen in his faithful reproduction, as its demolition, which he so much feared, has already begun; but because he was a man of noble soul, who made himself the friend of all, and the city of his sojourn the joy and care of his heart. England, too, has reason to be sorry for the loss of this gentle son, little known, perhaps, except to visitors to Venice, but to many of them well known as the artist alive to every tone in nature, the skilful craftsman, the warm and generous friend, the man always busy, yet never too busy to advise, direct, and aid. Many of us will feel that in the loss of that fine white head Venice has lost no small part of her present glory. His great picture has gone to London for exhibition in the Fine Art Gallery. He did what he could to stay the so-called restoration of St. Mark's, and, failing that, he did the next best thing, and gave the world a picture of the great front as we have seen it, but shall never see again. Much excellent work has been left unfinished, especially his proposed book on Ravenna, with illustrations by his own hand, of which place he knew more, I suspect, than any living man. It is to be hoped that at least his drawings of that city may be given to the world, accompanied by such explanatory letterpress as can be culled from his copious notes made on the spot. The body of my dear and lamented friend was fittingly borne to the grave by men of the P. and O. steamer lying here at the time, and was followed by many true mourners, whose one feeling seems to have been that another John Bunney would not soon be found."



## PIPE-FOUNDING IN GLASGOW.

IN the death of Mr. D. Y. Stewart, of St. Rollox Pipe Foundry, says the *Glasgow Herald*, the city has lost another "industrial captain," whose inventive and manufacturing skill, combined with great commercial enterprise and business integrity, contributed in a remarkable degree to make Glasgow the headquarters of a most important branch of the iron trades. The deceased, whose death occurred last week at Barassie, Ayrshire, was born in May 1813, in Lochee, which was then a suburb of Dundee. His father was a linen manufacturer there in the pre-jute period; but when the bad times for that town set in, causing misfortune to many otherwise healthy concerns, young Stewart, at the age of about sixteen years, became an apprentice mechanic, his employer, if we mistake not, being a heckle maker. Some time after finishing his apprenticeship he came to Glasgow, and qualified himself as an expert in general engineering and millwright work in two very famous establishments in those days, one of them being Claud Girdwood's, in the south-east part of the city, and the other being that of Robert Napier, just about the time when that eminent mechanic was engaged on the engines of the first four steamers out of which the great Cunard fleet of Atlantic liners has grown. As was very much the custom with able and ambitious journeyman engineers in those days, D. Y. Stewart did not rest content until he had seen a bit of journeyman experience in some one of the leading engineering shops in England, and in order to gain it he took service for a time in an equally famous establishment in London—that of Ravenhill, we believe. When he was about twenty-nine or thirty years of age, he returned to Scotland, and settled down in Montrose and married a Miss Black, whose brother had an interest in one of the two foundries which then existed in that town, and of which Mr. Stewart became the occupant.

The business which he carried on in that foundry was of a very miscellaneous character, but he persevered in it, and his trade increased in extent and importance. One of his early items of business was a contract for the chairs required in the construction of the railway then in progress between Perth and Aberdeen. At that time the Gorbals Waterworks were "on the cards," as also the works of the City and Suburban Gas Company; and as there was a strike in the foundry trade in Glasgow, that lasted for many months, he was stimulated to turn his attention to the invention of a machine by which the production of cast-iron pipes might be very greatly cheapened, and rendered more or less independent of skilled labour. The stimulus seems to have come from one of his employes, named James Young, who had been paying a holiday visit to Glasgow, and who told Mr. Stewart of the great business in pipe-founding which was then being established here. Mr. Stewart ruminated over the matter a good deal, and eventually on a certain Sunday, when he was attending divine service, he could not help gazing keenly and meditatively upon one of the columns by which the gallery of the church was supported. In a moment of happy inspiration he saw in his "mind's eye" the machine-worked ramming tool of the moulder performing its allotted task upon the sand in the concentric space between the "pattern" and the inner surface of the moulding-box, and in its progress upwards describing a screw-like motion around the column (or pipe, as it were). Soon afterwards he put the idea into practical shape, and in the year 1846 he was in a position to secure his invention by a patent. His first contract after doing so was an order for 200 tons of pipes for the town in which his foundry was then situated, and it was soon followed by one for the town of Fraserburgh.

Having made such a valuable aid to the pipe-founding appliances as his invention was then believed, and subsequently proved, to be, Mr. Stewart could not rest content with remaining in a small provincial town far removed from the iron manufacturing centres, and he at once resolved on finding his way to Glasgow for the prosecution of the new industry in pipe-founding by machinery. A powerful joint-stock company was formed for working the patent process, and Mr. Stewart, as the managing partner, started to build new works at St. Rollox in the month of October 1847—the first casting being made in the month of July of the following year.

We believe that the first contract executed by Mr. Stewart under his patent in this city was one for some 18-inch pipes for the Commercial Gas Company of London; but up to that time (1848) the largest pipes made by machinery were only 6 inches in diameter. It is an interesting fact that in the same year the late Mr. David Napier was making pipes for the Gorbals Waterworks at the famous and somewhat classical Camlachie Foundry. They were 24 inches in diameter, and of course they were hand-made, but the manufacturing facilities of the establishment were of such a character that only seven pipes per day could be turned out. Mr. Stewart experienced many difficulties with his machine at first, but they were eventually overcome, and it became such a great success as to lead to many great pipe contracts being placed in this city. For example, there was the contract for the great Liverpool Waterworks scheme, that known as the Rivington Pike. The contract in all was for 33,000 tons of 44-inch pipes, in 12 feet lengths. It was placed in the year 1848, and 17,000 tons were undertaken by Mr. Stewart's firm, the remaining 16,000 tons being distributed amongst

other three well-known foundry firms—Goldie, of Hayfield Foundry; Neilson, of Hyde Park Foundry; and Gilmour, Wilson & Co., of the London Vulcan Foundry, Port-Dundas. Owing to various causes the contract was not finished till the year 1855; and the result was that Mr. Stewart's firm had to take up the unfulfilled contracts, supplying in all the enormous quantity of 24,000 tons of piping for the Rivington Pike scheme.

For many years pipe-founding contracts have been placed in Glasgow in such numbers and on such a scale as has never been known in any other centre of the iron trades, and the St. Rollox Pipe Foundry has always had its full share of them. That establishment has long been equal in its manufacturing capacity to something like 2,500 tons of pipes per month, a turn-out which has been reached over many months on end. Not only has the machinery in use been on a large scale and of great variety for facilitating the work, but in recent years the number of workmen has also generally ranged between 400 and 500. With such an extraordinary manufacturing power, it is no wonder that the Charles Street firm have almost constantly been working at a succession of large orders, ranging from 4,000, 6,000, 8,000, or 10,000 tons up even to 14,000 and 20,000 tons. For example, the contract in hands at the time of Mr. Stewart's death, and still in progress, is one for 14,000 tons for the Vyrnwy Waterworks scheme of the Liverpool Corporation, the same as his first large contract; and for the Calcutta Waterworks the firm supplied 20,000 tons of piping. A contract for Quebec embraced 8,000 tons, and that quantity was also supplied to the towns of Roubaix and Turcoing, in France, in the year 1861, which was the first large, and almost the only, contract for pipes to any French town or city prior to the signing of the Commercial Treaty with France. The contract in question was taken on the faith that the treaty would be agreed to. The practice in recent years in connection with the pipe-founding firms in Glasgow has been for at least two of the local firms to go as joint venturers; and in that way Messrs. D. Y. Stewart & Co. and Messrs. Edington & Sons took a contract for 30,000 tons for Buenos Ayres (which is still unfinished), one for 24,000 tons for Monte Video, and one for 14,000 tons for the Linstrathen scheme of the Dundee Water Commissioners, while the four leading firms at the time—a few years ago—executed a contract for 90,000 tons for Rio de Janeiro, by far the largest water-pipe contract ever given out. The St. Rollox firm made 22,500 tons of pipes as their share of the contract. One interesting fact which we have further to note in connection with this matter is that from the same works there were supplied to the order of the War Office during the Abyssinian war 16 miles of 4-inch pipes, all of which were turned out in three weeks.

## ANCIENT AND MODERN PAINTING.

AN address was delivered at the annual meeting to the students of the Brighton School of Art by Mr. Herman Merivale. He began by referring to the prevalence of carping and false criticism, with special reference to the *London Times*, which had got into a habit of running down and depreciating everything English, and warning students in every field to learn, in dealing with the work of others, above all things to shun the carping spirit and to cultivate the spirit of generous appreciation; he said what had been done before could and would be done again. It was, he supposed, part of the immutable law that, just when science was pushing so resistlessly forward, the tendencies of painting should be so distinctly retrograde. He was by no means going to take a leaf out of the book of his friend of the *Times*, and say that painting was a lost art, even in England. But the singular superiority of ancient art, as a whole, was too striking and too subtle to escape anybody, and was too patent to allow one to be accused, for maintaining it, either of want of appreciation or the habit of praising the past for the past's sake. It was no exaggeration to appropriate an old saying, and talk of a careful visit to the Italian galleries as a liberal education. The difference of styles was in itself a history. They seem to see the moment when Leonardo da Vinci stepped in to trouble the pre-Raphaelites—beautiful as they themselves were—those Bellini's and others, in their soft colours and gifts of expressing tenderness. He remembered a *Pietà* by Gentile Bellini—only a dead Christ and a weeping mother, old and unattractive of feature; but, oh, so real and so sad!—which held him more at distance than all he saw in the gallery. But the sudden revolution in perspective looked like a miracle, and one tried to realise what it could have been to be alive and looking out for the novelties when Leonardo was still living, and Michael Angelo, Titian, Correggio, and Raphael all at once in the height of their work. They grew to be so completely with one, those painters, that one knew them soon at a sight; if not the individual, certainly the "school"—the school of Lombardy leading up, as it were, in tune and geography to the splendour of the Venetian school, the "school" of Titian and of Benifagio. It was strange that in England we never had a school in this sense—except the Norwich and "Old Crome"—unless we add the pre-Raphaelites, who caused an honest stir and movement in English Art. Unluckily, the analogy of their name breaks down in one respect. They had not yet heralded the birth of another Raphael. Well,



jump on a hundred years, from 1500, and this Italian dawn, and find Rembrandt, after his study of Italian model, bringing into trading Holland his new world of art, and for eight years looking at it through the happy medium of a happy home, and the sweet eyes of the wife and model; and so on from place to place and year to year, to watch the growth of the art which they supposed must have touched perfection, because it had declined. The effect of an Academy Exhibition to him was absolutely depressing, not because the work was so badly done, but because it was done so well, on the whole, up to a certain point, and no further. It was a very carnival of creditable mediocrity, and dreadfully suggestive of the averageness of humanity. Fancy a similar exhibition of a year's MS. novels, and what would the *Times* say? But he was coming round to the bugbear he started with, and he must have done, thanking them for listening to him so kindly and so long. They had great advantages for the students of the day, and he could but say to them—that were art students as to the others—and his best wishes with it—let them strive with all their might to distinguish the false from the true. Choose their own models and examples (for they would live to know that, though the value of a groundwork was inestimable, all the best education was self-education), and, particularly, sit and learn and wait. When the time came to aim, let them aim as high as they could—too high rather than too low. They were very likely to learn what he had learnt, that it might be possible to be very much bored at thirty, when things have not turned out as they meant and hoped, and they felt that the world for them was over, and then to live on till forty and find that it was only beginning, in a very well-spring of new youth. Let them take to heart one of Charles Dickens' maxims, that the main secret of success is ungrudging attention, though he thought he had more to trade on than most men, and whatever their success in productive work or walk of any kind, go on studying to the end, hoping and believing that soon the last day's study would not be lost, and the thread taken up elsewhere. Let them remember Michael Angelo's words when he was past eighty, "I am learning still."

#### THE BISHOP OF DURHAM ON CHURCH RESTORATION.

THE parish church of Aycliffe was reopened lately after restoration, which was directed by Mr. Ewan Christian. At the luncheon after the service Dr. Lightfoot said that the work of church restoration in these days had become more difficult than it had been in any previous epoch. It had been said that the dread of the biographer added another pang to death, and he was sure the dread of the antiquarian critic added a new pang to church restoration. They got a generous donor to put his hand into his pocket, but then up came the critic, and warned him against taking any part in a horrible piece of vandalism. Consequently the man took his hand out of his pocket as if it had been stung, and gave no contribution. But they ought to be grateful to the antiquarian for keeping them straight. Had the ruthless Henry III. had the fear of the antiquary before his eyes he would not have swept away the venerable Abbey of the Confessor, and Westminster Abbey would not have been built. And had that ruthless church restorer, William of Wykeham, been afraid of the antiquarian he would not have meddled with Winchester Cathedral, and grafted on the ancient form of art the style with which his name was associated. Coming nearer home, the same influence would have prevented the ancient Norman apse being destroyed, and the Chapel of the Nine Altars being inflicted on Durham Cathedral. Well, we were happier in these days. Our critics were ready at hand to warn us when we were disposed to lay hands on any historical monument. He was not sure that every historical monument was worth preserving, in spite of all the arguments that had been used on that side of the question. He thought a church was built for the congregation rather than for the cobwebs. He had in his mind the squire's pew of the last century and the early part of this. It was 5 feet square, and was made of good, substantial oak. There were curtains of red silk, and the pew had well-cushioned seats, a table, and sometimes even a stove. The object of a church was congregational worship, but the object of the squire's pew was isolation, and it negated the idea of congregational worship; and, secondly, he did not think it conduced to the worship of God. Still, it might be advisable to preserve such a relic of ancient days. He recollected hearing a story of how one of these pews was preserved. A squire insisted that his pew should be retained, though the vicar, who was having the church altered, wished to have it cut down. As the squire would make no concession, the vicar sent some masons one night and had the pew lowered, so that when the squire next went to church he had to go down two or three steps, and the plebeians looked down upon him just as people looked down into a bear's den. Speaking seriously, he congratulated the parish, and especially Mr. Eade, on the restoration of the church. So far as he had seen, he thought the architect had struck the happy medium. He had preserved what was valuable historically, and at the same time the church was comely in itself and convenient for public worship.

#### MURAL PAINTINGS AT GAWSWORTH.

A PAPER was read on Monday evening at a meeting of the Manchester Literary Club by Mr. Charles Hardwick, "On the Mediæval Mural Paintings and Presumed Tilted Grounds of Gawsworth." He referred to the theory put forth by Mr. Joseph Mayer that the appearance of the ground indicated that there had been there in the middle ages a locality used for the purposes of a *joust à plaisance*, as encounters for amusement were described, in contradistinction to the *joust à l'outrance*. This hypothesis depended entirely upon the shape of the ground, and Mr. Robert Brooke had shown that there was nothing at Gawsworth which could not be easily paralleled at many other places. Gawsworth Church was remarkable for the discovery on its walls in 1850 of three mural paintings, which had probably been covered with whitewash at the Reformation. The most interesting of these was a representation of the *Last Judgment*.

#### WHAT BECOMES OF THE NEW YORK PLUMBERS?

THE following article appears in the *New York Times*:—"People as a rule are not observant. This is singularly illustrated in connection with the migration of plumbers, which goes on year after year and never attracts the attention of anyone except an occasional scientific person. In the winter season plumbers are abundant. We find them on every block, and they almost infest our houses. In the summer they totally disappear, and it would be almost impossible to find a plumber in the city, even were we to want one. Where do the plumbers go in summer? Thoughtless persons will probably suggest that they go to fashionable watering-places, and there spend their ill-gotten wealth in riotous, or at all events extravagant, living. If this were so, our watering-places would be full of plumbers, whereas it is notorious that no one ever meets a plumber at Saratoga, Newport, or any other watering-place. Neither does the plumber go to Europe or sail the ocean in his own private yacht. The gorgeously-dressed men and women of the watering-places, and the tourists who travel in the style of princes, weak-minded enough to know no better, may own silver mines or oil wells or railroads, or they may write for the daily press, but they are never plumbers. The seaside camp meetings would doubtless give a liberal reward for a plumber with whom to experiment, but neither a penitent nor an impenitent plumber ever visits them. The simple truth is that in summer the plumber absolutely disappears, and the average man pays so little attention to anything outside of his business that so strange a phenomenon as the annual disappearance of an entire class of citizens does not awaken his curiosity in the slightest degree. There are, however, scientific persons who have long studied the habits of plumbers and who claim to have discovered that the plumber, like many species of birds, is migratory. The plumber exists only in countries where the snow falls. He is unknown in the tropics. There are slave-hunters and cannibals in Central Africa, but no plumbers. There are tigers and quantities of other beasts of prey in India, but an Indian plumber is unknown. In this climate there are numerous quantities of plumbers in the winter months, but they evidently find it impossible to endure the tropical heat of our summer days. Taking together these two facts—that the plumber flourishes only in cold climates and that he disappears from the United States as soon as the weather grows warm—we can easily frame the hypothesis that he migrates to colder regions, every spring and returns every autumn. There is no lack of facts to support this theory. It is by no means uncommon for a party of bold hunters in the Hudson's Bay district and on the Labrador coast to meet a stray hunter or fisherman who, when asked his address and occupation, will admit that he is a New York or Boston or Philadelphia plumber. No less than five probable plumbers have thus been met at different times within the last five years in the regions just mentioned. These, however, are doubtless only stray plumbers who have fallen behind the main body of plumbers while migrating, and have been unable to reach the high latitudes which are the proper summer *habitat* of their kind. Plumbers have unquestionably been met far to the north of regions frequented by hunters and fishermen. Hendrik Hudson found on the ice near the entrance of Hudson's Bay the frozen body of a man who had a small charcoal stove and a bag of plumbers' tools at his side. Ross, while caught in the Arctic ice, picked up a plumber's bill that was drifting before a strong westerly wind. Dr. Kane was told by the Esquimaux of a large town situated an indefinite distance north-west of the entrance of Smith's Sound, where white people lived who constantly went into each other's houses with pans of burning charcoal and curiously shaped iron tools in their hands; and though Kane disbelieved the story, there can be but little doubt that it referred to the summer settlement of a body of migratory plumbers. Finally, Captain Nares mentions that a man dressed in the Esquimaux style, and whom all the ship's company supposed to be an Esquimaux, once came on board his ship while she was in Smith's Sound. This apparent



Esquimaux carried a small piece of lead pipe in his hand, and when he was asked if he could repair a broken snow-shoe, muttered in plain English, to the astonishment of everybody, 'I'll go back to the shop for my tools,' and thereupon went away and never returned. In the face of this evidence it is impossible to doubt that plumbers are found in the coldest Arctic regions. These can be no others than plumbers who have migrated during the summer from the United States. They spend the warm months in remote regions of ice to which no traveller has yet gained access, and they return in the winter to carry on their destructive trade; and though this has been their habit from time immemorial, no one except a few scientific persons has ever so much as suspected it."

### BUILDINGS IN BRADFORD.

A STATEMENT was presented on Tuesday by the Building and Improvement Committee of the Bradford Town Council, which contained the following statistics relating to new streets and buildings.

The number of plans deposited and approved has been—

	1877.	1878.	1879.	1880.	1881.	1882.
Deposited . . .	523	417	449	441	383	416
Approved . . .	871	350	288	850	321	352

The number of dwelling-houses and other buildings included in the 352 plans approved of during the past year, as compared with the five preceding years, has been—

	1877.	1878.	1879.	1880.	1881.	1882.
Dwelling-houses . . .	1,213	1,701	720	714	577	319
Warehouses and mills . . .	36	28	20	30	19	30
Churches and chapels . . .	7	14	6	11	6	7
Public buildings . . .	2	0	1	1	2	2
Sundry buildings . . .	246	275	409	248	238	383
New streets . . .	31	46	29	36	4	10

The number of new dwelling-houses which has been certified by the Medical Officer of Health during the year as fit for habitation is 473. The number of cases in which such officer has found it necessary to withhold his certificate, on account of dampness and other sanitary defects, is forty-nine. The entire length of sewers completed during the year is 2,972 yards, which, added to the totals of previous years, makes the gross length of public sewers completed since the commencement of the work in 1862, 110,618 lineal yards, or 62 miles 1,493 yards.

### MANCHESTER ACADEMY OF FINE ARTS.

THE life classes of the Manchester Academy were opened for the winter session on Monday evening by an address from the President, Mr. Robert Crozier, who, after adverting to the fact that this was the twenty-third session during which the life classes had been held, said the Academy might be considered fortunate in having assiduous students, who clung to it season after season. He did not know any society of artists that afforded equal privileges to its members. There were no restrictions in regard to their mode of work, each student being free to follow his individual inclination. One thing only he would strongly impress upon the members—it was to bring the spirit of earnestness to bear on all they did, without which nothing could be satisfactorily accomplished. The field of art covered a wide area, and they ought as artists to seek to add to their stock of knowledge in order to be equal to whatever they set themselves to do. A sketch, however slight, might show power and the possession of a cultivated taste. It was only by earnest striving that they could attain to a comprehension of true character in art. In concluding, Mr. Crozier said, as they were all aware, the Royal Institution had been, in a spirit of liberality, handed over to the City Corporation, and they must trust to gaining public esteem by making their Academy worthy of the position to which it aspired, and worthy of the great city of Manchester.

**London.**—Extensive alterations are being made in the Church of St. Saviour, St. George's Square, S.W. In the nave the unsightly galleries have been removed. The caps, label terminations, and bosses supporting the roof have been elaborately carved, the latter forming a very fine angelic choir. A wooden floor has been laid under the seats, and two parish rooms are being constructed in the tower. In the chancel a handsome canopied reredos, with central group of the Last Supper, and two side figures, is being erected; the arcades on the north and south contain bishop's throne, sedilia, and piscina, with credence. The walls and roof are being richly decorated by Messrs. Clayton & Bell, and the floor relaid with polished marble steps and encaustic tiles from the architects' design by Mr. J. C. Edwards, of Ruabon. A fine brass corona is being made by Messrs. T. Potter & Sons, of South Molton Street, W. With the exception of the corona tiles and mural decoration, Mr. Thomas Earp, of Lambeth, has executed the whole. The entire work is from the designs and under the superintendence of Messrs. Romaine-Walker & Tanner, architects, 19 Buckingham Street, Adelphi, W.C.

### THE GLASGOW MUNICIPAL BUILDINGS.

A MEETING of the Glasgow Council was held on the 5th inst., when it was reported that Mr. Wm. Young had accepted the appointment as architect for the new municipal buildings. A letter was submitted from the author of the design "S. Ronan," who was one of those selected to compete in the final competition for the new buildings, stating that his outlays in the preliminary stage of the competition exceeded the premium he received by nearly 150%; and, without pretending that he had any claim for further remuneration, asking the Corporation to consider whether they would not at least reimburse him his outlays. The committee having considered the letter, and being of opinion that it would at least be worthy of consideration by the Town Council whether "S. Ronan's" mode of dealing with one part of the interior of the building might not be advantageously adopted, resolved to recommend that, provided "S. Ronan" agrees to allow the Corporation to adopt such part or parts of his plan of internal arrangements as they may think proper, he should be reimbursed his actual outlays, not exceeding a further sum of 150%. It was also remitted to the master of works and Mr. Young to consider and report what steps they would recommend to be taken with a view to the selection of the stone for the new buildings, and insuring that a good and durable one was got.

The Lord Provost moved the approval of the minutes.

Mr. Scott said he took exception to that part of the minute giving an additional grant to the author of the design "S. Ronan." He did not know why the committee should not make the same concession to all the others who might send in a similar letter. The fact that it was possible to take advantage of some portion of the plan would no doubt apply to other architects' plans as well as that of "S. Ronan." He would like to know if there was any special reason for this recommendation.

The Lord Provost said there was a special reason. There were on that plan some arrangements in the basement different from those proposed by Mr. Young. These when put before the committee received their approval; and so largely did they have the approval of Mr. Carrick and Mr. Barry that it was thought that if the author of the plan was agreeable to allow the committee to make such use of them as they thought proper, the proposed addition would be well spent money. There were two reasons which had weighed with the committee. One was that the author of "S. Ronan" was the only one who had made application; and the other was that if anything had fallen short in the arrangements with Mr. Young, the author of "S. Ronan" would have been the successful competitor. In these circumstances, it was thought that a larger expenditure having been incurred than was covered by the allowance of 150%, it would be a graceful thing on the part of the Council to acknowledge that.

Mr. Gray asked what progress was being made with the general question, as things seemed to be moving very slowly.

The Lord Provost said that the proceedings were being pushed forward as fast as possible consistent with accuracy. Mr. Young was at present in Glasgow, and he believed a great deal of work was being done. In a large building like that before anything could be done much time and thought had to be expended.

Mr. Scott expressed himself satisfied with the explanation given by his lordship.

### LEGAL.

#### Sheerness County Court.

#### BURROWS v. THOMAS AND OTHERS.—AMATEUR ARCHITECTS.

The plaintiff in this case, a working shipwright, claimed for 10*l.* 10*s.* for preparing plans for the erection of seven houses for the Philanthropic Lodge of Oddfellows at Sheerness, of which defendants are trustees. The lodge had a large amount of surplus capital, and, under the provisions of the Friendly Societies' Act, decided to invest it in building houses, which were afterwards to be sold to members upon mortgage. The plaintiff, who was a member of the lodge, was desirous of purchasing one of the houses, and he voluntarily submitted a plan of the kind of house which he thought would be most suitable for a working-man's dwelling. The Building Committee then invited him to assist them, and after drawing plans and making tracings he sent in a bill for 10*l.* 10*s.* The plaintiff was offered 3*l.* 10*s.* on settlement, but he declined to accept that sum, and it was paid into Court.

For the defence, it was maintained that the plans were unskillfully drawn, and had proved to be unworkable. One of the rooms was not provided with a door, the kitchen was not in accordance with the local bye-laws, no back wall was shown, and many other defects and inaccuracies were visible upon the plans. Plaintiff admitted that it was his first essay in drawing plans for the erection of buildings. His Honour said the defects were only what might be expected in an amateur's plan. He thought 10*l.* 10*s.* was an exorbitant charge, and should therefore give a verdict for six guineas, with costs of solicitor and three witnesses.



## CHURCH BUILDING AND RESTORATION.

**Clevedon, Somerset.**—The erection of a new Wesleyan Chapel and manse has been commenced at this growing and healthy watering-place. The memorial-stones were laid on the 28th ult., the interesting ceremony being witnessed by a large assemblage of Wesleyans from the surrounding neighbourhoods, but chiefly from Bristol. The buildings are Early English in design, and comprise a chapel to seat 500 persons, a schoolroom to accommodate 200 children, in addition to which all necessary and suitable classrooms and vestries are provided. The main walls and buttresses are to be of Pennant stone with Bath stone dressings, cills, plinths, and courses. The architect for the works, which are being executed by Mr. W. A. Green, of Clevedon, is Mr. Herbert J. Jones, of Bristol. The total cost, inclusive of lighting, heating, and erection of boundary walls, will be about 4,000*l*.

**Shefford.**—On October 4, the seventh centenary of the birth of St. Francis of Assisi, the foundation-stone of the new church to be dedicated in honour of that saint at Shefford, Bedfordshire, was laid, and the foundations blessed by the Right Rev. Dr. Riddell, Bishop of Northampton. The church is to serve for the ordinary parochial services, as well as the church of the seminary of the diocese for ecclesiastical students, and of St. Francis' Home for Boys. The architect is Mr. S. J. Nicholl, of 1 Caversham Road, N.W.

**Estover.**—A chapel has been opened at Estover, in the parish of Egg Buckland. Sitting accommodation is provided for 150 persons. The building is of local stone with red brick introduced. The internal fittings are of pitch-pine. Mr. Snell, of Courtenay Street, Plymouth, is the architect, and Mr. Foot, of Notte Street, the builder.

**Padbury.**—The parish church of St. Matthew has been reopened after partial restoration of the chancel. The work has been carried out under the superintendence of Mr. J. O. Scott, from the plans of the late Sir Gilbert Scott, by Mr. W. Brown, of Buckingham, at a cost of about 700*l*.

**Mere.**—A mission church newly erected has been opened at Mere. The building has been erected from the plans of Mr. C. E. Ponting, of Marlborough, the contractor being Mr. Hooper, of Mere. The woodwork was executed by Mr. C. Coward, of Mere, and the stonework by Mr. Osborne, of Overton.

**Taunton.**—The memorial-stone of a Congregational church, replacing an old and inconvenient chapel, has been laid. The building will be of limestone with Bath stone dressings, the roof being slated. More accommodation is required in summer than in winter, and the church has been arranged in sections which may be consecutively brought into use; thus the unobstructed ground floor area, seating 276 adults, will be used by the winter congregation only; the next arrangement will be the removal of the curtains to throw the space under the gallery into the general area, giving 78 additional seats. By sliding back the gallery curtains 114 further sittings are added to the church, giving a total of 468. The school will join the chapel in semicircular form, and is to be divided from the chapel by a sliding partition which can be removed, thus converting the school into an aisle which will be used for sittings, so that with 103 seats in the gallery, from 650 to 700 persons can be seated within the building. Mr. John Sulman is the architect, and Messrs. Howell & Son, of Bristol, are the builders.

**Aycliffe.**—The ancient church of St. Andrew, Aycliffe, near Darlington, has been reopened after undergoing alteration and renovation. The work has included the entire rebuilding of the north aisle in the Perpendicular style and the south wall of the chancel, and the putting on of new roof from end to end of the building, the rearrangement of the ancient Jacobean seats of fine oak, the building of the organ chamber and vestry to the north of the chancel, and the restoration of the upper stage of the tower. The works have been carried out, under the direction of Mr. Ewan Christian, of London, by Mr. R. T. Snaith, of Darlington, with Messrs. Allison & Lishman as sub-contractors.

**Bolton.**—The church of Holy Trinity has been reopened after undergoing extensive works of alteration and decoration. The decorative work has been carried out by Mr. Roberts, of Bradshawgate, Bolton, from the designs of Mr. R. Knill Freeman, architect, of Bolton.

**Hoggeston.**—On Tuesday, September 19, within the octave of the usual village festival and of Holy Cross day, was reopened by the Bishop of Oxford the church of SS. Peter and Paul, of Hoggeston, which is said to be a contraction for Holy Cross Town, indicating the supposed original dedication. The building is one of considerable character and interest, and after repeated attempts since the preparation of the first plans eight years ago, and various proposals for reducing the width of the aisles, or for removing one or both of them altogether, or for an entire rebuilding on a smaller scale, on the score of cost and of the church being unnecessarily large for the wants of the parish, the original plans for reinstatement

have been carried out in their entirety. The chancel has been done by the rector, the Rev. C. H. Hole, and the remainder almost wholly through the exertions of two of the principal farmers, Mr. Baylis and Mr. Morris. The building had become latterly insecure for use, and had been closed. The chancel, which had been rebuilt and shortened nearly to half its length, has been restored to its original length, and fitted with stalls in carved oak. The rest of the church has had new roofs, a very few of the old timbers being capable of re-use. The lead covering of the aisles has been recast and replaced. Several new walls and windows and all new pavements were necessary, with the exception of some monumental slabs. The nave has been fitted with solid oak benches on a wood block floor. The old font and pulpit have been replaced. Great effect has been obtained by the use of Northamptonshire orange-brown sandstone, instead of the customary Bath. The work has been carried out by Mr. Green, of Wellingborough, under the direction of Mr. William White, F.S.A.

## NEW BUILDINGS.

**Manchester.**—The Upper Campfield Market, Deansgate, has been opened. The new building has been erected from designs by Messrs. Mangnall and Littlewoods, architects, of Manchester, its total length being 187 feet and 130 feet wide, covering an area of 2,700 square yards. There are three spacious entrances in Liverpool Road, Tonman Street, and Deansgate, the latter being through the centre of the new block of buildings erected by the Manchester Corporation for a free library. The building is principally of iron construction, the sides being enclosed with wood framing glazed with rough plate-glass. Internally the building is divided into three bays, the centre one or main avenue being 50 feet in width between the columns which support wrought-iron elliptical lattice principals and iron purlins. The building is well lighted from the roofs, and ample ventilation is secured by louvres running the entire length of the building in the centre of each bay.

## ART WORKMANSHIP.

**English Tapestry.**—At the Royal Tapestry Factory, Old Windsor, some very beautiful tableaux, designed by Mr. J. E. Hodgson, R.A., and intended for hall and staircase decorations for Mr. Cornelius Vanderbilt's mansion, New York, are being worked by the employes upon the looms of the establishment, which is under the patronage of the Queen and Prince Leopold, Duke of Albany. The series comprises several large pictures—one of which is 22 feet long and six or seven feet high—representing English sports, including deer-stalking, stag and fox hunting, coursing, pheasant and grouse shooting, and salmon, trout, and bottom fishing. As illustrating the progress of the revival of the art of tapestry weaving in this country, it may be mentioned that the English apprentices under instruction at the factory are now engaged upon four *portières* with views of Windsor Castle, Osborne, Buckingham Palace, and Balmoral, and which are being woven in imitation of the old Arras tapestry.

## ENGINEERING WORKS.

**The Cost of Tramways.**—A return has been prepared by the Tramways Committee of the Bradford Corporation showing the cost of the works lately completed. Active operations were commenced on the Manningham Lane section of the Bradford Tramways on September 8, 1881, and the line was completed on January 4 last, but it was not inspected and opened until January 31. The length of this route is 1 mile 1,408 yards, consisting of 1,595 yards of single and 1,573 yards of double line. The rails, points, and crossings have been provided and laid by Messrs. Ridley & Co., of Newcastle-on-Tyne, at a total cost to the Corporation of 5,518*l*, or 2,048*l* per mile of single line. The cost of the concrete foundation and paving has been 6,828*l*, or about 2,530*l* per mile. The annual rental to be paid by the lessees for the first ten years amounts to 781*l* 3*s*. 9*d*., or at the rate of 290*l* per mile. The Leeds Road tramway was commenced on January 19 in this year, and completed on June 7 last. It is 1 mile 1,238 yards in length, and consists of single line with seven passing places, the latter being each 72 yards in length. The system of tramway is the same as adopted in Manningham Lane, but on account of the severe gradients on this route, which average about 1 in 22 for the greater part of the distance, the lessees have thought it desirable to use steam-power. The annual rental to be paid by the lessees amounts to 583*l* 12*s*. 6*d*. The tramway in Sunbribe Road was commenced on April 13 last, and completed on September 9, and certified by Major-General Hutchinson, on behalf of the Board of Trade, on September 20. The length of the route on this section is 1 mile 1,320 yards—including 1,705 yards of double line, and 1,384 yards of single line, with four passing places. The rails, points, and crossings have been provided and laid by Messrs. Ridley & Co., at a total cost to the Corporation of 5,575*l*, or 2,046*l* per mile of single line. The cost of the concrete foundation



and paving has been 6,964*l.*, or about 2,556*l.* per mile. The annual rental to be paid by the lessees during the first ten years of their term is 790*l.* 1*s.* 9*d.* The Tramways Committee, after paying for maintenance of paving, and setting aside a sufficient sum for repairs and renewals of rails, points, and crossings, will be enabled to pay off in thirty years the interest (calculated at the rate of 4 per cent.) and sinking fund on the capital expended, so that at the expiration of that period the tramways will be entirely free from debt.

### ARCHÆOLOGY.

**Roman Remains in London.**—During the construction of the extension of the Metropolitan Railway large quantities of Roman pottery, enriched and plain, have been found, including some elegant specimens of the best description of Samian ware; also mediæval pottery of native and foreign manufacture, together with a miscellaneous collection of iridescent glass, china, stone cannon balls, &c. A fine piece of the old City wall was disclosed at Trinity Square, just below the surface. It was in good order, but a length of about 73 feet had to be removed. It was noted in this locality that the ancient ditch had been diverted away to the eastward from the wall for some especial purpose. In Trinity Square there were also discovered some interesting foundations of Roman buildings; for example, a large area of red tessellated Roman pavement laid on a concrete bed. It was supported by a sub-structure of oak piling, with which in some places were the roots of oak trees, a clearing of vegetation having evidently been made by the early colonists previous to the erection of the building; a wall, a platform, or way on two sides, trough gutter, and some other ducts remained, with which were associated fragments of pottery and unique semi-cylindrical tiles, with diaper enrichments. Mediæval walls were met with near Aldgate as though connected with the foundations of the religious house of the Minorite Order of St. Clare. Contiguous to these was an ancient well with curb and windlass. At the bottom appeared pottery and other objects. Few other remains which could be attributed to the ancient convent were discovered. A Roman cemetery is known to have existed at the Minories. Sepulchral relics were consequently found between Aldgate and Trinity Square, but chiefly nearer the Great Eastern Railway from Church Street southwards. A massive lead coffin was discovered near Church Street. It was ornamented with scallop shells and a beaded pattern of well-known Roman type. Near to John Street a large quantity of remains, with two black urns, were found, also Roman.

**The Rewards of Research.**—Mr. J. E. Cussans, the author of several valuable books on archæology, in a letter respecting his proposed "History of Hertfordshire," writes as follows:—I am constantly receiving letters inquiring when the fourth volume of my History, which is to contain an account of the City of St. Albans, will be issued. I am by no means sure that I shall ever attempt the task. With some exceptions—and I am happy to say that there are exceptions in the county, and very notable ones—the landed proprietors and rich men are listlessly apathetic. I did not undertake my work with any idea of profit. Had I been less scrupulous than I have been, I might perhaps have earned bricklayers' wages: but as it is I find myself, after thirteen years' incessant labour—every year containing 365 days, except the three which had 366—a poorer man by 3,000*l.* than if I had spent the time in teaching white mice to dance. Fishermen are proverbially sanguine, and great allowances must be made for their peculiar temperament; but would that man be deemed sane who continued his futile efforts after fishing the years I have, during which time he had not only caught nothing, but had lost his health by reason of his ill-directed enthusiasm, and expended all his money in ground-bait? Now that is just my case. I have fished during all seasons, and in all weathers, in a Hertfordshire ink-bottle, with a steel pen for hook. I am now very tired. Constant attention to my night lines, often until three o'clock in the morning, has made me feel sleepy. At length, disgusted with the fishes' want of taste, or my own clumsiness, I have put by my tackle. Though my old enthusiasm is certainly blunted, it is not entirely destroyed. I am still anxious to finish my work, if possible. In fact, I am jealous lest another should step in and supplant me; but I cannot afford to make the county a present of another 1,500*l.*, for that would be the approximate loss I should sustain if I essayed my fourth volume on the lines of the former. It would consist of about eight hundred pages of text, and would necessarily contain many and costly illustrations of the Cathedral. I estimate that five hundred subscribers, at six guineas each, would about cover the cost of production. Assuming, then, that I am guaranteed against absolute loss, I purpose relegating certain portions of the work to associates, each of whom will be responsible for his particular contribution. Thus A. B. will write Verulam, and C. D. the Cathedral; while I shall content myself with exercising a general supervision as editor, and contribute a few chapters on St. Albans. I may add that the A. B. and C. D. here foreshadowed are eminently qualified for the departments assigned them. I purpose issuing a prospectus in a few weeks, by which to test the feeling of the county.

### GENERAL.

**M. A. Dumaresq**, the French battle-painter, has presented to the Manchester School of Art an etching executed by him of the portrait of Vasco de Gama in the Lisbon Museum.

**Mr. G. Goldie**, of London, the architect of St. Wilfrid's Catholic Church at York, has designed a memorial and monumental cross to the late Provost Reader, which has now been placed at the head of the tomb in the cemetery, York.

**Mr. John Ross**, of Fearn, Ross-shire, has obtained the contract for the construction of the new line of railway between Keith and Buckie. The contract amount is about 60,000*l.*

**Messrs. Robert Boyle & Son**, the well-known ventilating engineers, of Glasgow and London, have again been successful in carrying off "first honours" for their inventions. They were awarded a silver medal—the highest prize—for their system of ventilation at the International Naval Exhibition at present being held at Tynemouth.

**The Duke of Edinburgh** has agreed to lay the foundation-stone of the old Eddystone tower on Plymouth Hoe on the 20th. Mr. Snell, of Plymouth, is acting as honorary architect.

**Messrs. William Edgumbe Rendle & Co.**, of Westminster, have been selected by the directors of the Great Northern Railway Company of Ireland to glaze the new terminal passenger station in Amiens Street, Dublin, on their "Acme" system of glass roofing. We are informed that this Company have used Rendle's method of glazing solely for the last three years on their new stations and goods-sheds.

**The Bideford Town Council** have decided to call in an architect to adjudicate on the competitive plans for the new bridge buildings.

**The Berlin Museum Authorities** have undertaken the publication in facsimile of all the known drawings of Albert Dürer. The first volume will contain examples from the collections of Mr. Malcolm, of Portlough, and Mr. John Mitchell, of London, as well as the drawings in the Berlin Museum.

**Chiswick Parish Church** is about to be restored, under the direction of Mr. Pearson, R.A., at the cost of Mr. Henry Smith, of the firm of Fuller, Smith & Turner, the brewers.

**The Wakefield Town Council** on Tuesday approved of a tramway scheme for the borough, estimated to cost 15,000*l.*

**Manchester Royal Institution.**—The following nominations have been made for the appointment of seven representatives to serve on the Art Gallery Committee of the Corporation, viz.:—Mr. W. A. Turner, Mr. R. Smith, Mr. T. R. Wilkinson, Mr. S. Barlow, Mr. C. J. Pooley, Mr. G. Faulkner, Mr. C. J. Galloway, Mr. E. Salomons, Mr. T. Ashton, Mr. T. C. Horsfall, Mr. T. Worthington, Mr. C. P. Scott, Mr. J. F. Hutton, Mr. G. Milner, Mr. H. M. Ormerod, and Mr. R. Peacock.

**The Royal Archæological Association.**—The annual excursion to London of the country members of the Association is fixed for the last week of October, extending from Friday the 27th inst., to Tuesday the 31st, inclusive. Among the more interesting places which it is intended to visit will be the Heralds' College; Eton College, Windsor Castle, and St. George's Chapel; the new discoveries at the Tower of London and in the neighbourhood of the Minories; Waltham Abbey Church; and the once Royal Palaces of Greenwich and Eltham.

**The Statue of Louis XIV. at Caen** was, in accordance with a vote of the Municipal Council, set up again on Tuesday last in the Place du Parc, in front of the Lycée and the Palais de Justice.

**The Connaught Theatre, Holborn**, has been sold, subject to the approval of the Court of Chancery, by Messrs. Thurgood & Martin, of Chancery Lane. The premises, after decoration, will be opened under the management of Mr. John Baum.

**The Newbury Town Council**, having received notices from four or five electric light companies of their intention to apply for licenses from the Board of Trade for the supply of the electric light within that borough, have instructed their clerk to take the proper steps to prevent any company obtaining an exclusive footing within the borough, or otherwise interfering with the public lighting to the prejudice of the corporation as owners of the gas undertaking.

**Traffic on Metropolitan Bridges.**—According to an official statement just submitted to the Metropolitan Board of Works, the following was the average traffic over the bridges of the metropolis in twenty-four hours in August:—London Bridge—110,525 pedestrians, 22,242 vehicles; Southwark—25,507 pedestrians, 3,340 vehicles; Blackfriars—79,198 pedestrians, 13,875 vehicles; Waterloo—32,815 pedestrians, 10,370 vehicles; Charing Cross—16,130 pedestrians, no vehicles; Westminster—44,460 pedestrians, 11,750 vehicles; Lambeth—9,800 pedestrians, 810 vehicles; Vauxhall—17,828 pedestrians, 5,453 vehicles; Chelsea—14,500 pedestrians, 2,338 vehicles; Albert—8,134 pedestrians, 725 vehicles; Battersea—10,200 pedestrians, 1,342 vehicles; Wandsworth—1,900 pedestrians, 386 vehicles; Putney—5,245 pedestrians, 1,407 vehicles; Hammersmith—7,740 pedestrians, 1,167 vehicles. The total was therefore 384,042 pedestrians, and 75,235 vehicles per day.



# The Architect.

## THE INSTITUTE OF ARCHITECTS AND ITS WORK.



NEW session of the Institute of Architects opens in the first days of November; and although there may not be so much interest as there might be attaching to the annual recurrence of this event, it is to be hoped there are some members of the body who have public spirit enough to entertain a hope that the coming academical

year may be a fortunate one, or to experience some apprehension lest it should not. Happy is the country, says the adage, which hath no annals; and perhaps there is a certain felicity in the condition of certain of our public institutions also when they transact no business, or nominal business rather than real; but apathy in a prominent learned society, or what professes to be an honoured historical guild, is at any rate not such a characteristic as is likely to meet with general approbation in the active age in which we live, and any one will take it for granted that the bulk of the men of business who constitute the Institute of Architects, and the still greater number of those outside its pale who are concerned in the welfare of a distinguished profession and the progress of an illustrious art, will be found to desire to see the coming session at least inaugurated with some promise of work, and carried forward with some earnest sense of duty.

Recent incidents have demonstrated two things: that our private architectural work in England is still being exceedingly well managed, and that the public influence of our architectural authorities is being just as much mismanaged.

The position of English architects in the year 1882 may perhaps be described thus. The mediævalist revival has practically been brought to a close, as regards all but pure church work, by the completion of Mr. STREET's great Palace of Justice. It is the unavoidable fate of all artistic revivals to yield sooner or later to the necessity for change. The feeling may be very strong indeed, and generally is, that some particular revival in fashion for the moment is based upon transcendent merit in a way that no other fashionable mode has ever been before; but it gives place nevertheless, when the time comes, as inevitably as its predecessors, and restless fancy, in turning over a new leaf, forgets the last as completely as it has forgotten others. It is in pursuance of this law, therefore, that Secular Gothic is now a thing of the past, and that we have to consider with a little anxiety what is to be the style of the immediate future. That it is to be a free rendering of the Renaissance is now apparently settled. A few years ago (to take a good illustration), the Glasgow competition would have displayed in the most approved designs little else than one variety after another of hybrid Romanesque, as the outcome of a hesitating application of so-called Gothic principles to so-called Classic forms, or of Classic principles to Gothic forms; but what we have actually seen—although a good deal of it can scarcely be called so academical as some could wish—is in the main a simple and hearty acceptance of the spirit of the modern European or Italian manner, with no further compromise than a desire to render it a little more piquant or striking than it often is. To criticise the details of some of the designs unfavourably would be easy enough; and indeed to dispose off-hand of the pretensions of two or three of the best of them by simply calling them bad French would be easier still; but it is much more to the purpose to regard the whole experiment most leniently, as a successful demonstration in favour of a fairly refined Classic style, alike free from the quaint whimsicalities of Queen Anne and the harsh severities of monastic Gothic. Other endeavours after novelty on a sufficiently stately scale have also gone in a similar direction, and with similar success; and thus, although no doubt the popular mode of the day for ordinary work has an unquestionably Dutch flavour, we may say that the more healthy examples, and the more dignified, of what may be called the national architecture of England, are just now composed in the style which has customarily prevailed throughout Europe at large during the

last three hundred years, and of which the English Gothic revival, so far as secular art is concerned, is now seen to have been only a local and temporary interruption. And we may even add the opinion that, when English architects are once again fairly started on the line of advance which the French and Germans have continued to follow so ably while we were expending our energies in another direction, it may very probably be found that the peculiar muscularity of design acquired in the practice of the style that is now gone by will contribute to the best English work a national vigour of the utmost merit. But this remains to be seen; and we may for the present be content to look forward to the competition which is spoken of for the new offices of Admiralty and War as the next great opportunity for testing in proper form the capabilities of the rising masters of the profession.

The President of the Institute may therefore congratulate the members upon the progress of architectural art in England without much hesitation: indeed we ought not to omit to observe that even in the everyday Queen Anne work of our commonplace men we may also fairly admit the presence of a great deal that is equally creditable to the ingenuity and adroitness of the designers. But when he comes to speak of that influence of the Institute itself which ought to give public force and shape to such endeavours, what can he say? Doubtless he will try to explain away the misadventure which brought down upon the heads of the Council the contemptuous animadversion of the Minister in Parliament; but we will let that pass. What can he say of such matters of the old renown of the Guild as the exposition of artistic and antiquarian learning in its yearly and daily advance, the interchange of correspondence with foreign guilds, the consolidation and unification of the profession throughout the kingdom itself, and the promotion of fraternal feeling and individual honour? The one incident to which he can point in this direction as an evidence of activity is the recent inauguration of an examination test for membership; and probably this will be made the most of, especially as so little has been revealed of its mysteries that criticism cannot be ventured upon; but in all else it would seem as if the system of reactionary government, from which such great benefits were expected, or at least promised, has resulted in nothing but sheer inaction. Literary matters, scientific matters, artistic matters, both at home and abroad, are all no one knows where. Correspondence with foreign societies, since the death of Mr. COCKERELL, has virtually come to an end. Intercourse with even our own provincial associations has apparently ceased. That kind of material prosperity which is identified with increase of membership in quantity may be satisfactory enough, but what of the quality? And as for the old authoritative influence of the Institute in the days when Professor DONALDSON, Mr. CHARLES NELSON, and Professor LEWIS were secretaries, whether we look to the profession throughout the country, or to public bodies, or to the Government, it is not too much to say that it has disappeared.

If we attribute all this failure to the simple fact that the whole contrivance of the reorganised Council was a mistake, we think we shall be supported in this opinion by all who understand the politics of public societies. It is a maxim which is no longer open to dispute, that the system of administration in such associations ought always to be such as has *grown up* into form and substance with the growth of the body itself, and never a merely theoretical constitution excogitated from first principles by some radical reorganiser. Yet with this principle staring them in the face, the reformers of ten years ago, although no doubt men of age and experience, like the late Mr. WYATT and Mr. WHICHCORD, suffered themselves to become so involved in purely abstract considerations, that they upset all that had *grown up* during forty years of excellent work, and established in its place a system which had the double disadvantage of being both revolutionary and reactionary. In a word, in order to create a new aristocracy (if the reader must laugh, let him laugh) in the form of "Members of Council," and a dignified monarchy in the form of a hereditary presidency, they entirely overthrew what in political parlance is called the liberties of the community, and no one has been allowed to speak his mind in the Institute since that day. The consequences are easily to be guessed. Wherever general freedom prevails, although inconveniences may occasionally attend its exercise in the eyes of the apathetic, the result is life; wherever liberty is sacrificed to mere order and symmetry, the order is lifeless and the symmetry a farce. Above



all things, the official ascendancy and control of those who are selected for past importance and not present activity is entirely fatal to vital management; and when every member of the Council is encouraged to wait in serene repose for his succession to supreme dignity by seniority, it is no wonder that the whole administration is by one stroke brought down to the level of a Lord Mayor's Show or the Court of a Livery Company.

It is apparently for the purpose of overthrowing such a state of things that the provincial members of the Institute are understood to have been engaged in preparing a powerful memorial in favour of the demand that the election of the Council should no longer be left in the hands of the forty or fifty who are able and willing to attend personally at an annual meeting in May. Those who live in London and have nothing better to do have thus the monopoly of voting; indeed there are many of even the London men who are unable to attend so late at night because they live a few miles out of town. What is now suggested is that ballot-papers shall be received from all members who desire to vote, at whatever distance, and that a little ingenuity shall be introduced to make this harmonise with the accidental letter of the law under which alone the present very restricted monopoly unintentionally exists. It is within our knowledge that the reorganised Council has already arbitrarily if not rudely refused to allow such a proposal to be brought before the general body, and we wait with some interest the result of the new application, wishing it, we need not say, more success. It will perhaps be argued by some that the election of the Council is after all but an immaterial side issue; but this is quite at variance with the public experience of this country wherever acquired. Personal, and even petty, as election affairs often become, it cannot be doubted that, if they are fairly conducted, they afford in practice not only the best opportunity for the expression of public opinion, but frequently the only opportunity; and on this ground, if on no other, we do not hesitate to say that the close vestry system which virtually prevails in the Institute is the very worst policy that could be pursued as regards the vitality of the body.

But the most serious of all blunders in the reorganisation is the encouragement it offers to the senior members, for the sake of what at the time was frankly called "ambition" (which can only mean the desire of personal aggrandisement), to wait in masterly inactivity for their turn to take the honour of being president. The late Mr. STREET conferred a great benefit upon the Institute when he came forward to oppose this pernicious principle in his own person, as he did at considerable risk, first by resigning the equivocal position of vice-president, and then by claiming the presidency in opposition to the nominee by succession. On his election it was understood that the rule thus defeated would be abrogated for ever, so soon as the forms of procedure could be satisfied. Mr. STREET died: and we regret to say that the promise, which, if only out of regard for his memory, ought to have been at once carried into effect, has been courageously violated by the persons in accidental authority, not only in defiance of the declared will of the constituency, but—what is more provoking—through the instrumentality of mere forms, over which, it would appear, the members at large have practically no power. It is high time that something were done to promote a revision of such a state of things, and we hope the memorial of the country members may bring on such a movement. The function of a Council of Management is the performance of work and not the enjoyment of dignity, and to make it a question of personal aggrandisement—except in so far as a little ordinary vanity must be conceded to the infirmity of man—is in plain language a perversion of duty, a degradation of office, and an insult to the elementary purpose of an association of learned and accomplished men.

**Birmingham Architectural Association.**—On Saturday last the members, adopting a programme previously arranged by the honorary secretary, Mr. F. W. Franklin Cross, visited Hales Owen. The ruins of the abbey were inspected, and afterwards the church. The latter is an ancient structure, portions having been built prior to the Roman conquest. The west door, the south porch door, the aisle pillars, and the chancel arch are all of very early date; the church, however, presents specimens of Norman Decorated and Perpendicular work, together with a remarkably fine specimen of a Saxon font. The members afterwards visited the chapel of St. Kenelm. After a walk of three miles the members returned by train to Birmingham.

## JEAN BAPTISTE GREUZE.—I.

BY A CORRESPONDENT.

THREE thousand odd guineas were bid for a GREUZE at the sale which dispersed the Duc de MORNAY's collection of pictures a few weeks after the death of that remarkable politician, speculator, and art patron. The experts were startled, for the world had scarcely yet begun to find the charm of GREUZE's works, and REMBRANDT's, VELASQUEZ, and MURILLO's had exhausted the enthusiasm of competitors. The sale took place in 1857. Three years later on, the 4,640 guineas given for *La Pelotonneuse* was distanced at the San Donato sale by the 5,480 guineas paid by the Marquis of HERTFORD for *Ceufs cassés*, followed on the same day by 3,220 guineas for the *Petite fille au carlin*, and 1,250 guineas for *L'Ecouteuse*. Thus it has come to pass that while he who created these portraits of innocent voluptuousness, having a seductive loveliness and a witchery so peculiarly their own as never to have been imitated, died in 1804 a suppliant for bread, forgotten by the world of which he had been the idol, alone in a poor lodging, and to follow whose coffin to the grave there were but DUMONT and BARTHELEMI—a hundred years has not yet elapsed, and we find the happy possessor of a GREUZE can at will convert his smallest canvas into a pile of gold. A letter, the last we possess from GREUZE's pen, addressed to the Home Office, and dated 1801, has a pathos which touches by its earnest simplicity. Translated verbatim, the old man writes thus:—

The picture on which I am at work for Government is half-finished. Absolute want compels me to crave a further advance on its price, which I require to enable me to complete it. I have had the honour of explaining my position to you. I am seventy-five. I have lost fortune, courage, and power. I have not a single commission. Never in my whole life was I in such utter misery. I flatter myself you will take my case into consideration, for it is urgent.—Respectfully,

GREUZE.

This appeal is dated from the lodging in the Palace of the Louvre which was granted to him by the State. Artists of distinction were allowed to occupy small rooms over the picture galleries originally inhabited by the courtiers in attendance on the Valois princes. Certain privileges, besides immunity from rent and taxes, were attached to residence within a royal palace, which enhanced their value to artists. The description given in contemporary memoirs of the condition in which these lodgings were kept is not inviting. If a vivid sense of outward beauty was the distinctive characteristic of their tenants, let us hope that their olfactory organs were dull, and even non-existent.

GREUZE dates from the Galerie du Louvre (the error in orthography is characteristic). He was the son of a tiler, as had been WATTEAU, another of the glories of French art. JEAN BAPTISTE GREUZE sprang from the old *bourgeois* class. Among his ancestors were *prévôts du roy* of the town of Tournus, and of those magnates he was as proud as the seigneur of the neighbouring château of the Crusaders among his forefathers who had crossed swords with SALADIN and his knights. JEAN was born at Tournus in 1725. From his childhood he refused toys and asked for pencils. The tiler, his father, intended him to become an architect, but the boy's vocation was distinct. Mistake was impossible with regard to it; still, the father hesitated, till on one of his birthdays the boy brought him, for a gift what he believed to be an engraving, but which proved to be a pen-and-ink drawing executed during play hours. The tiler apprenticed the lad to a man the good citizens of Tournus considered to be an artist, but who required his students to turn out a given number of drawings per day, at so much the gross. Patient endurance was not the predominant quality of the youth's nature. After a week of forced labour he quitted the workshop, and walked to Paris selling sketches for bread as he went. Of his early days in the capital we have no record, till we hear of his attracting the notice of the sculptor PIGALLE, then engaged on his *Mercurie attachant ses talonnières*, now in the Gallery of Modern Sculpture at the Louvre—rescued, by the bye, but just in time, from the destructive influence of exposure to weather in one of the public gardens. The great man, ignored by his own countrymen and compelled to work for foreign courts, discerned the boy's genius, and foretold his brilliant future. Paris, however, proved a rough school. The lad joined the Academy classes. His provincial garb and bluff manner drew on him the contempt of the under-masters; the worst place in the model-room was invariably assigned to him. To these untoward circumstances was added the jealousy with



which his fellow-students observed that he surpassed them by his freer manner of drawing, and more especially by his happy rendering of expression. His life became unendurable. It, however, must be admitted that the strong sense he possessed of his own power, and a certain self-assertion, which characterised him to the last, probably contributed to his unpopularity. Madded by the sarcasms of the students, he one day rushed out of the classroom, and without introduction presented himself to SILVESTRE, the Academy Professor of Drawing, the same who had instructed the Dauphin in that art. The old man received him kindly, inspected the contents of his portfolio, and, returning with him to the classroom, ordered him to draw a portrait in presence of the students. GREUZE carried off a victory which inaugurated a career of success, interrupted and broken only by the "great Revolution, which swept into oblivion institutions apparently more stable than the reputation of an artist.

GREUZE was elected Associate of the Academy in 1755, through the influence of SILVESTRE. His first picture, *Le Père de Famille* (now in the Louvre), was bought by M. DE LA LIVE DE JULY. No artist of modern times had dared to depict rustic life. Royal personages, statesmen in flowing wigs, generals in cuirass and gold-laced coats, court beauties in brocade and hoops, allegorical subjects, and a few landscapes, had filled the galleries of Versailles as the productions of the painters of the epoch. WATTEAU had, with rare genius and exquisite grace, introduced pastoral subjects, but his shepherds and shepherdesses were attired in silks and satins. Not one of GREUZE's predecessors had ventured to depict a peasant in fustian and wooden shoes, surrounded by his wife and daughters clad in homespun and linen grown on the farm, children, rosy with health, playing with a dog, and the grandmother at a spinning-wheel. M. DE LA LIVE threw open his house and invited the *vertuosi* of the capital to judge this novel production. Connoisseurs, taken by surprise, were seduced by the virginal graces of the young wife; her short-waisted gown, the face set in the shadow of the hair, the rounded cheek in high light against it, and the something voluptuous in the eyes and mouth, which mysterious sensuousness remained the salient characteristic of all GREUZE's subsequent delineations of women. The child's head, its chin resting on the table, with its singular freshness of colour, its childlike expression, and, above all, its angelic smile, had for the critics the charm of novelty. Their verdict prepared the public to echo their enthusiasm when the picture was exhibited at the Salon of 1755.

GREUZE, although elated by his triumph, felt that his artistic education was incomplete. He had not studied the old masters at Rome, and therefore accepted Abbé GEORGE-NOT's generous offer to defray the expense of a journey to Italy. While at Rome a romantic adventure redounds to his credit. Furnished with letters of introduction to a prince of the Holy Roman Empire, he presented them in person to the Duke of P——, who received him with kindness, and requested young GREUZE to give his daughter instruction in drawing. The young princess was an only child, and had recently lost her mother. The girl was beautiful and GREUZE a genius. VENUS's "waspish-headed son" meddled in their affairs. FRAGONARD, then a student at the Villa Medici, drew GREUZE as *Le Cherubin Amoureux*. The cherub, however, had a certain amount of common sense, and resolved to fly from temptation. He accordingly ended his lessons. The prince, meeting him accidentally at St. Peter's, upbraided him for his careless attendance, and, informing him that his daughter was ill, took him to his palace to show a newly-acquired TITIAN, which picture, he added, his daughter intended copying—a task the prince wished GREUZE to assist her to accomplish. Common courtesy thus rendered it incumbent on GREUZE to inquire daily as to the health of the young princess from the traditional nurse in whose charge she was. The nurse, after the pattern of nurses, had scent of the state of things, and, probably as a remedy for the depressed spirits of her young mistress, led GREUZE into her boudoir. GREUZE lost his head; others have done likewise under similar circumstances. He plunged recklessly into a love declaration. "Then," replied the peerless LETITIA, "I may be happy." Here was a revelation for which the "cherubin amoureux" was utterly unprepared. The girl, with the ingenuousness of her age, proceeded to announce her intention of marrying him. "And your father, the prince?" interposed the old nurse, who by no means calculated on so serious a *dénouement*. The prince, it is well to

explain, had arranged her marriage to a man she hated—a fact much in favour of GREUZE. The marriage had only been deferred in consequence of the girl's illness. The princess added to her previous announcement the fact that she was heiress to her mother, and consequently possessor of fabulous wealth. Turning to her nurse, she said, "I bestow it on GREUZE, whom I marry at once. He will take me to Paris; you shall come with us. He will become a second TITIAN, and my father will be proud of his son-in-law." With singular unselfishness, the young artist reflected on the frightful abyss into which such a marriage would plunge her, and resolved to renounce the brilliant prospect love for a moment had conjured. He feigned an illness which speedily became real in the form of brain fever. On recovering from it, in spite of a message from his LETITIA imploring him to fly with her, as her wedding-day to the hated Count PALLIERI was fast approaching, he fled, carrying off a "copy, surreptitiously taken, of her portrait. In the volume of GREUZE's engraved works at the Bibliothèque Nationale is one entitled "*L'Embarras d'une Couronne*." The classical features, the flashing dark eyes, the wealth of raven hair, the magnificent bust, are purely of an Italian type. In his "*Prière à l'Amour*" the same features are reproduced. The latter is dedicated to Princess TIGNATELLI. It is evident the remembrance of his first love remained to him the type of Italian beauty, and it is more than probable the features reproduced are those of the heroine of this adventure.

The series of twenty-four costumes of the peasants of Genoa, Bologna, and Savoy, executed on his way home and engraved by A. MOITTE, were sold at the RAUDON DE BOISELL sale (1777) for 50*l.*, but fell to 10*l.* at VASSAL DE SAINT HUBERT's auction six years later, although 8*l.* was given for a slightly-coloured pastel sketch of a woman's bust, *en chemise*, her hair tied by a ribbon. In truth, the drawings are not interesting. It is singular, however, to remark even in these Italian subjects how thoroughly French is their treatment, and how little influence the study of the old masters had on his style. They were exhibited at the Salon of 1757, to which GREUZE also sent two children's heads, which possess the charm and fascination so peculiar to the subsequent creations of his genius. In his larger works certain faults of colouring are manifest. There is a lack of transparency in the whites, a peculiar grey-ness in the whole scale of colour, a hesitation, or perhaps indecision, in the key-note, and a heaviness in the shadows; but in GREUZE's children and young girls' heads his deficiencies in tone are forgotten. The sunny light of summer turns the hair of his *garçonnet* to gold, and the bloom on her cheek is the freshness of heaven's breeze; the blue eye laughs beneath the sweeping eyelash; the curves of the half-open mouth give as lovely a smile as MURILLO ever painted on an angel's face; the diminutive rounded shoulders have a half-humorous pathos; the whole essence of the work is expression—the passing of a smile over the face of a child. When GREUZE's subject is a young girl, the red gold hair bound by a ribbon is cast back from the face, *belli capelli ricci e innalati*. Truly the tracery of blue veins on the snowy forehead is discernible; in the darkness of the grey blue eye is passion blended with shrinking timidity, rendered by the *noyé du regard* of which GREUZE had the secret. The bloom on the cheek is beneath rather than on the skin; the magic of rose and crimson is on the open nostril and full trembling lips, parted by the unfathomable smile; a transparent gauze veils but does not conceal the bosom; sometimes a ray of sunlight casts the rose tint of the gauze on the snowy bosom, after the manner of RUBENS. The whole picture is realistic, if you will, and seduces by its suggestiveness rather than by what it actually brings before the spectator.

GREUZE's master was RUBENS. He and his friend the engraver WILLE spent hours at the Palace of the Luxembourg, perched on ladders they bribed the gardeners to lend, studying the RUBENS', and striving to penetrate the germinal principles of that master's art, much as WATTEAU fifty years before had done when he lodged at the palace with his friend CLAUDE AUDRAN. His *têtes de jeune filles*, even at the commencement of his career, were eagerly purchased. WILLE boasts of the price he gave for one. WILLE was his *deus ex machina*, and put GREUZE in the way of making money as well as a reputation by sending small pictures of children and young girls to Germany, at that period under the influence of FREDERICK the Great, and therefore enthusiastic on French art and literature. *La Simplicité*, exhibited at the Salon of 1759, having attracted the attention of Madame DE POMPADOUR, was



purchased by her from the lady for whom it was painted. GREUZE immediately reproduced the subject for its original proprietor so happily that the copy surpassed the first picture. *La Simplicité*, shown to the king, at once excited his admiration, and was the cause of an overwhelming number of orders. At the Salon of the same year (1759) GREUZE exhibited *L'Accordée du Village*, since engraved by FLIPART and by ALIX. M. DE MARIGNY, brother of Madame DE POMPADOUR, gave 120*l.* for it; it fetched at his auction in 1781, 768*l.* It was purchased for the king, and is now at the Louvre. At M. DE JULLIENNE'S sale a coloured sketch of it was sold for 17*l.* The head of the bride is a portrait of Mdle. DUCREUX, in whose family a study, taken by GREUZE for *L'Accordée*, of the young lady at fifteen, was preserved till the year 1865, when this study was sold among other pastels belonging to the DUCREUX family. The success of *L'Accordée* was attested by the fact that the picture was reproduced on the stage of the Italian opera in "*Les Noces d'Arlequin*," which brought down the house in a storm of applause. It is true that the painting lacks harmony of tone and is carelessly executed; nevertheless it was the event of the Salon, and GREUZE was considered as the representative of a new order of thought, and the man destined to reform the public taste by the pure tone of his scenes of pastoral life and the moral inculcated by his subjects. In a letter to the *Journal de Paris* GREUZE relates the incident observed by him as he crossed the Pont Neuf which gave rise to the picture entitled *La Belle Mère*. The injustice with which he remarked a stepmother beat a young girl excited his sympathy, and he resolved to paint the subject in order to hold up to public contempt the line of conduct he deplored—whether with success as regards those much-abused persons or not is an open question.

GREUZE was never happier than when describing his own works. In a letter dated December 1786, published by the *Journal*, he gives a lengthy description of his *Veuve et son Curé*, in which he endeavours to convince his readers that he painted chiefly with a view to the improvement of public morals; but, unfortunately for this object, GREUZE threw over these subjects a sensuousness which utterly destroyed the moral effect of the lesson he desired to impart. He sketched the scene as it had been enacted under his eye; but in his successive drawings he insensibly altered the expressions of his actors, and instead of ragged children whom an ill-tempered step-mother has maltreated, we have delicious round-limbed, rosy-cheeked, and blue-eyed boys, whose shoulders only lack wings to convert them into *amorini*. In the *Savonneuses* his washerwomen play with the linen they are supposed to wash, bewitching by their grace. There is an *opéra comique* air about his rustics in the *Père de Famille* and in his *Fils Naturel*, spite his posing as the disciple of DIDEROT and the painter of Virtue. To rival our HOGARTH was his ambition, but HOGARTH had a moral intensity, a penetrating power, a strong truthfulness GREUZE never attained or even understood.

(To be continued.)

## BISHOP BERKELEY ON ARCHITECTURE.

A FEW days ago there was issued an appeal for funds to erect a memorial to Bishop Berkeley in Cloyne Cathedral. It was truly said that "The name of Berkeley has won honour for England among the philosophers of Europe, the philanthropists of America, and among the admirers of genius and virtue in every quarter of the globe." To this it may be added that in an age when national art was neglected Berkeley stood alone in advocating the duty of encouraging architecture, painting, and sculpture in this country, and that in his appreciation of art, no less than in his metaphysics, he was far in advance of his contemporaries. His efforts in this direction have been forgotten. Berkeley's theory of matter will remain a subject for discussion, although not always of a serious kind, for the majority of people will be of Byron's opinion that—

When Bishop Berkeley said there was no matter,  
And proved it, 'twas no matter what he said.

But his writings on subjects which are supposed to be more practical, and which were tested by a varied experience of life, are neglected, and it is not considered necessary to use even a grin to vanish Berkeley the statesman. Now, when a place among English worthies is claimed for him, the opportunity may be

allowed to recall some of those writings which represent one aspect of Berkeley's system.

George Berkeley was born in the county of Kilkenny in Ireland in 1684. His grandfather was an Englishman. In those days the process of amalgamation, by means of which so many strangers became more Irish than the Irish themselves, was no longer potent, and Berkeley considered himself to be a West Briton. He said that the "upper part" of the people of Ireland were truly English by blood, language, religion, manners, inclination, and interest, and that if the children of old Romans born in Britain were still Romans, there was no disputing their claim to be Englishmen. We mention this because it is supposed that there was more or less of the Western wildness about Berkeley's deeds and thoughts. The truth is, that he was more of an Englishman than his friend Swift, and his whole life exemplifies that sense of duty, prudence, and faith in facts which are associated with the English nature. As the late Professor Ferrier wrote, "The fact, the whole fact, and nothing but the fact, was the clamorous and incessant demand of Berkeley's intellect. No man ever delighted less to expatiate in the regions of the occult, the abstract, the impalpable, the fanciful, and the unknown."

In 1709 Berkeley startled scholars with his "Essays towards a New Theory of Vision," in which he maintained that the perception of distance or size was the result of an act of reasoning rather than of the sense of sight. It was followed by "The Principles of Human Knowledge" and the "Dialogues between Philonous and Hylas," in which he opposed the theory that was as old as philosophy of a substratum of matter which was common to all things. Through these publications he was brought into notice, and he was appointed chaplain to that modern Don Quixote, the erratic Earl of Peterborough, who was then Ambassador in Sicily. Afterwards he acted as companion to a young gentleman who was making the "grand tour." When he returned to England he found everybody crazy about South Sea and other projects for attaining wealth in a short time. Berkeley believed that prosperity was only to be secured by industry and frugality, and that the remedy for the evils of the time was to be found in the fostering of public spirit. One of the means towards that end was, according to Berkeley, the employment of art—and in his "Essay towards Preventing the Ruin of Great Britain" we find the following passages:—

It would be a very useful policy, and warranted by the example of the wisest governments to make the natural love of fame and reputation subservient to promoting that noble principle, a sense of public spirit. Triumphal arches, columns, statues, inscriptions, and the like monuments of public services have in former times been found great incentives to virtue and magnanimity, and would probably have the same effects on Englishmen which they have had on Greeks and Romans. And perhaps a pillar of infamy would be found a proper and exemplary punishment in cases of signal public villainy, where the loss of fortune, liberty, or life are not proportioned to the crime, or where the skill of the offender or the nature of his offence may screen him from the letter of the law.

Those noble arts of Architecture, Sculpture, and Painting do not only adorn the public, but have also an influence on the minds and manners of men, filling them with great ideas and spiring them up to an emulation of worthy actions. For this cause they were cultivated and encouraged by the Greek cities, who vied with each other in building and adorning their temples, theatres, porticoes, and the like public works, at the same time that they discouraged private luxury: the very reverse of our conduct. To propose the building a parliament house, courts of justice, royal palace, and other public edifices suitable to the dignity of the nation, and adorning them with paintings and statues which may transmit memorable things and persons to posterity, would probably be laughed at as a vain affair, of great expense, and little use to the public; and, it must be owned, we have reduced ourselves to such straits that any proposition of expense suiteth ill with our present circumstances. But how proper soever this proposal may be for the times, yet it comes so properly into a discourse of public spirit, that I could not but say something of it. And at another time it will not seem unreasonable if we consider that it is no more than the wisest nations have done before us, that it would spirit up new arts, employ many hands, keep the money circulating at home, and lastly, that it would be a notable instance of public spirit as well as a motive to it.

We have only to imagine a clergyman during the railway mania suggesting the construction of splendid public buildings as a means of restoring the national sanity, and we shall understand the courage which inspired Berkeley in 1721. The Deanery of Derry was accepted by him in 1724, but he thought he might be more useful if he conducted a college in Bermuda for the instruc-



tion of Indians. "His heart will break," said Swift, when describing the scheme, "if his deanery be not taken from him." The Indian college was not a success, owing to the Government endowments being withheld, but his residence in Rhode Island gave Berkeley the opportunity to compose the Dialogues, which were afterwards published with the title of "The Minute Philosopher." The object of this work, which was an imitation of the Platonic Dialogues, was to refute the fashionable scepticism; eighteenth-century free-thinkers, according to Berkeley, being "the very same with those Cicero called minute philosophers." The best thing about them was that they were supposed to be ravished with the abstract beauty of virtue. The endeavour of Berkeley was therefore to utilise the sentiment by explaining to them that, as without thought there can be no end or design, and without an end there can be no use, and without use there is no aptness or fitness of proportion from whence beauty springs, it will follow that beauty is not to be found in a system formed, connected, and governed by chance, fate, or other blind unthinking principle. To demonstrate the truth of this theory by something concrete, nothing could be better fitted, he believed, than an exposition of what constituted beauty in architecture, and the following extracts will give a notion of the Berkeleian system of aesthetics:—

Those who have considered the theory of architecture tell us the proportions of the three Grecian orders were taken from the human body as the most beautiful and perfect production of nature. Hence were derived those graceful ideas of columns which had a character of strength without clumsiness or of delicacy without weakness. Those beautiful proportions were, I say, taken originally from nature, which in her creatures referreth them to some end, use, or design. The *gonfiezza* also, or swelling, and the diminution of a pillar, is it not in such proportion as to make it appear strong and light at the same time? In the same manner, must not the whole entablature, with its projections, be so proportioned as to seem great but not heavy, light but not little, inasmuch as a deviation into either extreme would thwart that reason and use of things wherein their beauty is founded, and to which it is subordinate? The entablature and all its parts and ornaments—architrave, frieze, cornice, triglyphs, metopes, modillions, and the rest, have each an use, or appearance of use, in giving firmness and union to the building, in protecting it from the weather and casting off the rain, in representing the ends of beams with their intervals, the production of rafters, and so forth. And if we consider the graceful angles in frontispieces, the spaces between the columns or the ornaments of their capitals, shall we not find that their beauty riseth from the appearance of use, or the imitation of natural things whose beauty is originally founded on the same principle, which is indeed the grand distinction between Grecian and Gothic architecture, the latter being fantastical, and for the most part founded neither in Nature nor in reason, in necessity nor use, the appearance of which accounts for all the beauty, grace, and ornament of the other.

One of the friends then remarks that the Greeks were able, without any sacrifice of the principle of beauty, to vary the proportions of their buildings to suit the requirements of distance or position, and in that respect they differed from the architects of the age:—

This latitude or license, he says, might not perhaps be safely trusted with most modern architects, who in their bold sallies seem to act without aim or design, and to be governed by no idea, no reason, or principle of art, but pure caprice, joined with a thorough contempt of that noble simplicity of the ancients without which there can be no unity, gracefulness, or grandeur in their works; which of consequence must serve only to disfigure and dishonour the nation, being so many monuments to future ages of the opulence and ill-taste of the present.

It is not difficult to imagine how incredulous Berkeley would have been if some prophet informed him that the debased buildings of his age were to be accepted as models for imitation at the close of the nineteenth century. As a firm believer in progress he could hardly suppose that in the noblest of the arts there was to be retrogression. A Greek did not regard architecture more highly than Berkeley. To his mind there was something divine in the qualities which give character to one of the temples, and he suggests that in architecture alone we can find the key to the mystery of beauty:—

Architecture, the noble offspring of judgment and fancy, was gradually formed in the most polite and knowing countries of Asia, Egypt, Greece, and Italy: It was cherished and esteemed by the most flourishing states and most renowned princes, who with vast expense improved and brought it to perfection. It seems above all other arts peculiarly conversant about order, proportion, and symmetry. May it not therefore be supposed on

all accounts most likely to help us to some rational notion of the *Je ne sais quoi* in beauty?

According to Berkeley the beautiful in dress and furniture, as well as in building, sculpture, and painting, is something real and well-grounded. But having before his eyes imitations of Dutch vagaries, in churches and houses, full-bottomed wigs, hoops and other structures of whalebone and buckram, he was of opinion that the English and other Northern peoples were not competent to create the beautiful if they were directed by their natural taste. It was only from ancient, that is, Greek and Italian models, that the genuine τὸ καλόν was to be drawn.

The "Minute Philosopher" gained for Berkeley (through the influence of Queen Caroline) the bishopric of Cloyne. A year after his appointment he published "The Querist," a tract containing nearly six hundred questions, and which in the opinion of Sir James Macintosh contains "more hints still unapplied on legislation and political economy than are to be found in any equal space." From "The Querist" we can infer the condition of Ireland in days when gentlemen were rakes and ladies were gamblers and extravagant, while idleness and beggary abounded. Berkeley's remedy for Irish evils might be said to consist in self-reliance and industry. He inquires whether, if there was a wall of brass a thousand cubits high round the island, Irishmen might not live cleanly and comfortably, till the land, and reap the fruits of it. Once more he introduces his favourite arts, but this time he does not meddle with theory. In the first place he suggests the necessity of a general diffusion of art, in order that it might be applicable to the staple manufactures of the country. Here are some of the queries which are readily converted into axioms:—

Whether those same manufactures which England imports from other countries may not be admitted from Ireland? And, if so, whether lace, carpets, and tapestry—three considerable articles of English importation—might not find encouragement in Ireland? And whether an academy for design might not greatly conduce to the perfecting those manufactures among us? Whether France and Flanders could have drawn so much money from England for figured silks, lace, and tapestry if they had not had academies for designing? Whether when a room was once prepared and models made in plaster of Paris, the annual expense of such an academy need stand the public in above 200*l.* a year? Whether our linen manufacture would not find the benefit of this institution, and whether there be anything that makes us fall short of the Dutch in damasks, diapers, and printed linen but our ignorance in design? Whether those who may slight this affair as national have sufficiently considered the extensive use of the art of design, and its influence in most trades and manufactures wherein the forms of things are often more regarded than the materials? Whether there be any art sooner learned than that of making carpets? And whether our women, with little time and pains, may not make more beautiful carpets than those imported from Turkey? And whether this branch of the woollen manufacture be not open to us? Whether human industry can produce, from such cheap materials, a manufacture of so great value by any other art as by those of sculpture and painting? Whether pictures and statues are not, in fact, so much treasure? And whether Rome and Florence would not be poor towns without them? Whether they do not bring ready money as well as jewels? Whether in Italy debts are not paid and children portioned with them as with gold and silver?

Berkeley's advice was neglected by the Irish manufacturers, and in consequence they have lost their position in the markets of the world. The trade of poplin-weaving survived to our time, but owing to the absence of good patterns it is gradually decaying. Another subject that is repeatedly introduced into "The Querist" is building. In no country are there fewer old mansions worth the notice of the traveller than in Ireland, and the reason is that the money which in other countries is expended on building was in Ireland lavished on objects of a less worthy kind. In the following queries it will be seen that the duty of building is suggested by many considerations; and here again Berkeley was in advance of his time, for he was the advocate of what is now known as fire-proof construction:—

Whether, if the arts of sculpture and painting were encouraged among us, we might not furnish our houses in a much nobler manner with our own manufactures? Whether we have not, or may not have, all the necessary materials for building at home? Whether tiles and plaster may not supply the place of Norway fir for flooring and wainscot? Whether plaster be not warmer as well as more secure than deal? And whether a modern fashionable house, lined with fir, daubed over with oil and paint, be not, like a fire-ship, ready to be lighted up by all accidents? Whether anything is a nobler ornament in the eye of the world than an Italian palace—that is, stone and mortar skilfully put together and



adorned with sculpture and painting, and whether this may not be compassed without foreign trade?

What would be the consequence if our gentry affected to distinguish themselves by fine houses rather than by fine clothes? Whether any people in Europe are so meanly provided with houses and furniture in proportion to their incomes as the men of estates in Ireland? Whether building would not peculiarly encourage all other arts in this kingdom? Whether smiths, masons, bricklayers, plasterers, carpenters, joiners, tilers, plumbers and glaziers, would not all find employment if the humour of building prevailed? Whether the ornaments and furniture of a good house do not employ a number of all sorts of artificers in iron, wood, marble, brass, pewter, copper, wool, flax, and divers other materials? Whether in buildings and gardens a great number of day labourers do not find employment? Whether by these means much of that sustenance and wealth of this nation which now goes to foreigners would not be kept at home, and nourish and circulate among our own people? Whether our expense in building and improvements doth not remain at home, pass to the heir and adorn the public? And whether any of those things can be said of claret? Whether in proportion as Ireland was improved and beautified by fine seats the number of absentees would not decrease? Whether he who employs men in buildings and manufactures doth not put life in the country, and whether the neighbourhood round him be not observed to thrive? Whether every squire that hath made his domain swarm with busy hands, like a beehive or anthill, would not serve his own interest as well as that of his country? Whether a gentleman who hath seen a little of the world, and observed how men live elsewhere, can contentedly sit down in a cold, damp, sordid habitation in the midst of a bleak country inhabited by thieves and beggars? Whether, on the other hand, a handsome seat amidst well-improved lands, fair villages, and a thriving neighbourhood, may not invite a man to dwell on his own estate, and quit the life of an insignificant saunterer about town for that of an useful country gentleman? Whether it would not be of use and ornament if the towns throughout this kingdom were provided with decent churches, town houses, workhouses, market-places, and paved streets, with some order taken for cleanliness?

A century and a half have elapsed since the foregoing suggestions were made public, and as few improvements have been introduced during that period, Dr. Berkeley's words are as applicable as ever. We should like to hear that a memorial in his honour will be raised, but the best tribute to his memory would be the improvement of the country which claims him for a native.

### EARLY BOOK ILLUSTRATION.\*

IN considering what are the principles that should determine book illustration, it is impossible not to be struck with the constant neglect of those finer qualities of taste which are so clearly established in the very earliest specimens of the art. By this I do not mean, of course, that the block-books are the earliest extant examples of wood-engraving. The block-books belong to the middle of the fifteenth century, but wood-engraving had already been known and produced for some considerable period; it was used, as we are told, in attesting documents so early as the thirteenth century; but its first important development is found in connection with the production of playing cards by the German cardmakers in the beginning of the fifteenth century.

The Germans were the first to practise card-making as a trade, and they largely exported their wares, produced at Augsburg, into the cities of North Italy; nor was it until the year 1441 that the cardmakers of Venice obtained an order from the magistrates, directing that no foreign manufacture of printed cards should be any longer imported. These printed cards were usually coloured with a stencil placed over the block. It was only natural that this mode of reproducing impressions of a design should speedily be adopted by the Church for the purpose of circulating among the people figures of the saints. Possibly the cardmakers were themselves employed in the service of the Church; and it is, at any rate, certain that the earliest sacred subject engraved on wood, the celebrated block representing the St. Christopher, in the possession of the Earl Spencer, and which bears the date 1418, was found in the convent within fifty miles of the city of Augsburg. This print, like the early cards, is coloured by means of a stencil-plate; the design is of considerable size, measuring  $11\frac{1}{4}$  inches in height, and 8 inches in breadth, and shows a quality of art superior to that which enters into the illustration of the earliest printed books.

There are several other early wood blocks which rank with the St. Christopher in point of time and style. One of these is the design of the Annunciation, preserved in the same volume which contains St. Christopher; another represents the Martyrdom of St. Sebastian, and a third, St. Bernardin, is preserved in the National Library at Paris. There is one characteristic which belongs to wood engravings of this period, and which is dependent

upon the process by which they are afterwards coloured. In the original block it is not uncommon to find that certain parts are left untouched, or partly indicated, with the view of being afterwards filled up by means of the stencil-plate.

It would not serve our purpose to-night to enter into a detailed examination of these early woodcuts, although they possess the highest interest in connection with the development of an art which was destined to be permanently associated with the production of printed books. Our special concern just now is to follow the progress of pictorial illustration in its relation to literature, and here, as I have already stated, the next step in advance is marked by the production of what are known as block-books, which date from about the middle of the fifteenth century. The block-book forms an important connecting-link between the illuminated manuscript and the later achievements of the printing-press. It has this in common with the illuminated manuscript, that it is the harmonious and coherent result of a single artistic process, and the finest block-books possess for this reason a certain completeness of effect which could never be secured even by the most elaborate and beautiful specimens of mechanical typography. The great charm of the illuminated manuscript consists in the fact that the spirit of the artist seems to enter as much into the transcription of the text as into the invention of the ornament or design which accompanies it. The whole bears the stamp of human handiwork and of human individuality; a quality that, from this point of view of art, is of higher value than the utmost perfection of mechanical skill. Something of the same peculiar fascination belongs to the block-books, although many of them are of comparatively little value in point of artistic refinement and skill. The block-book, as its name implies, is a book printed, text and illustration together, from a carved block. Before the invention of movable type the demand for the general circulation of popular religious works doubtless led to the employment of the wood-engraver's art, which had already found exercise in multiplying the figures of the saints. The exact date and place to which the origin of these block-books is to be ascribed is somewhat uncertain, but it seems probable that the earliest specimens were produced in Holland some years before the middle of the fifteenth century. I have said that these books have an intimate connection with the illuminated manuscripts which they superseded, and this is clearly shown by the fact that, in many instances, original manuscripts are still in existence, from which the engravers of the block-books obviously derived their inspiration. The works most freely circulated by this means are the "Apocalypse," the "Biblia Pauperum," and the "Ars Moriendi"; and in several instances the manuscript prototype is still in existence. But although these early engravers were clearly dependent upon the illustrators of the illuminated manuscripts for the material of their work, it would be misleading to assume that the results they achieved are in any sense comparable to the models from which they are taken. Mr. Quaritch, to whom I am indebted for much valuable suggestion in connection with this subject, has pointed out that the labour of engraving these books must, in many instances, have been entrusted to workmen with little art or skill in the management of their material; and certainly there are several considerations which go far to support this theory. In the first place, the engravings in the block-books are in many instances not up to the level of the art of the time. Mr. Chatto has pointed out that the block of the St. Christopher, of which mention has already been made, and which is, undoubtedly, to be ascribed to an earlier date, is artistically of much finer quality than most of the illustrations to the works issued from the printing-press; and there are instances of blocks inserted in manuscripts produced before the year 1440, which prove that the cuts in the block-books do not, as a rule, afford a fair index of the resources of the art at the time. A superb manuscript of the Apocalypse, secured by Mr. Quaritch at the Didot sale, containing designs of the highest artistic beauty and excellence, goes further to prove that the block-books, as a rule, were rough and rude imitations of the originals, executed by journeymen rather than by trained artists. But there are brilliant exceptions to this general rule, and the British Museum is fortunate in possessing one of the very finest of these block-books, which has recently been reproduced by the Holbein Society. This is the "Ars Moriendi," acquired in 1872 from the Weigel collection at Leipsic for the sum of 1,072*l.* 10*s.*, the highest price ever paid by the trustees for any printed book. But this precious possession, whatever its cost, must be reckoned of inestimable value as an early and admirable specimen of book illustration. Unlike most of the other block-books of the period, it is a genuine and admirable work of art, and it is only necessary to compare the cuts with those contained in other versions of the work in order to realise the superior claims possessed by the author of the original edition. Mr. Bullen, in a most interesting essay, prefixed to the Holbein Society publication, fixes a later date for the "Ars Moriendi" than for most of the other block-books with which we are familiar. "The manufacture of block-books," he writes, "commenced in Holland, and afterwards practised in Belgium, appears to have travelled about in the middle of the fifteenth century into Germany, and fixed itself at Cologne, where this edition was in all probability executed;" and it is certainly true, as he proceeds to point out, that the illustrations betray the influence of the lower Rhenish school.

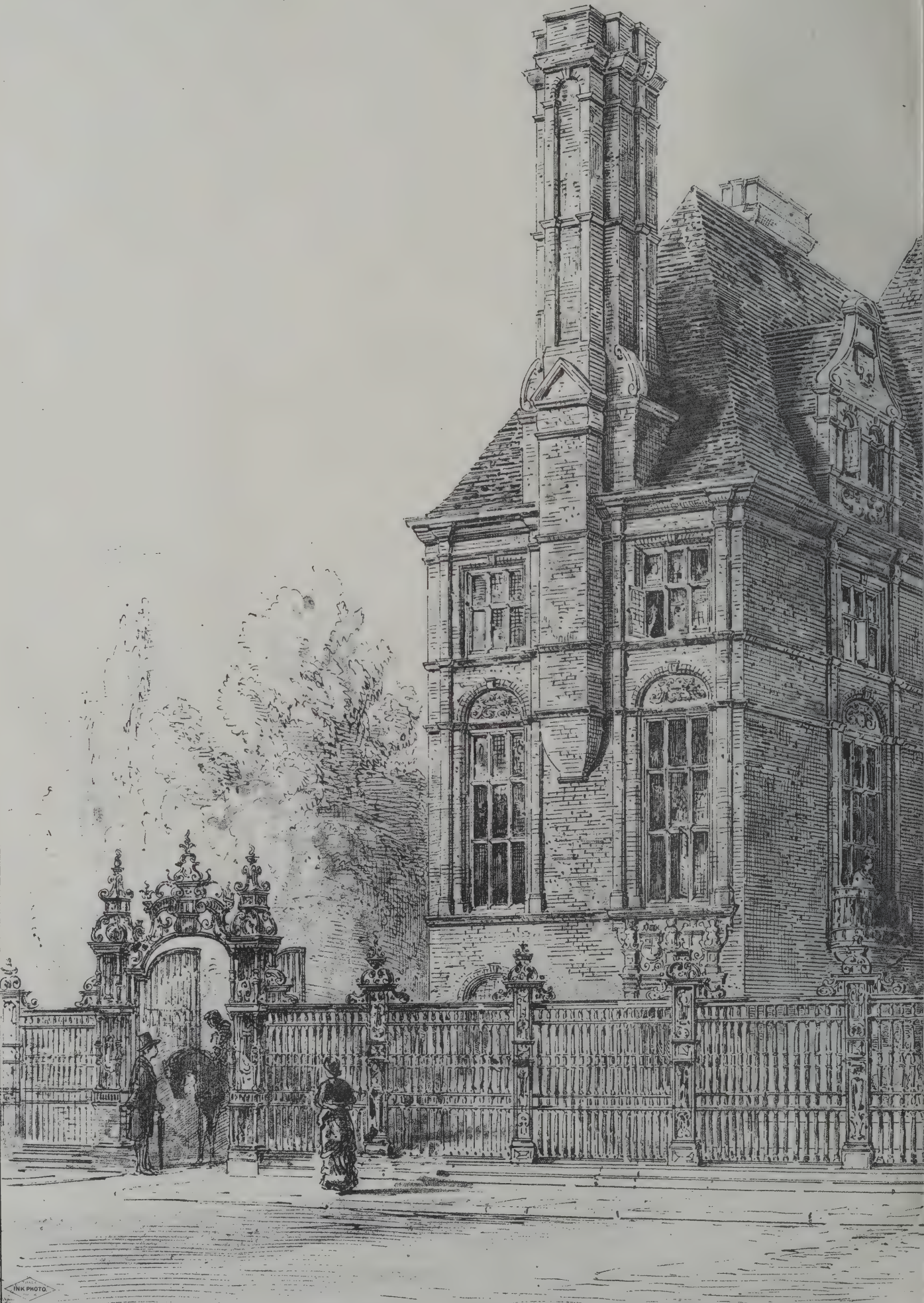
\* From a report of a Cantor lecture, by Mr. J. Comyns Carr, published in the *Journal of the Society of Arts*.



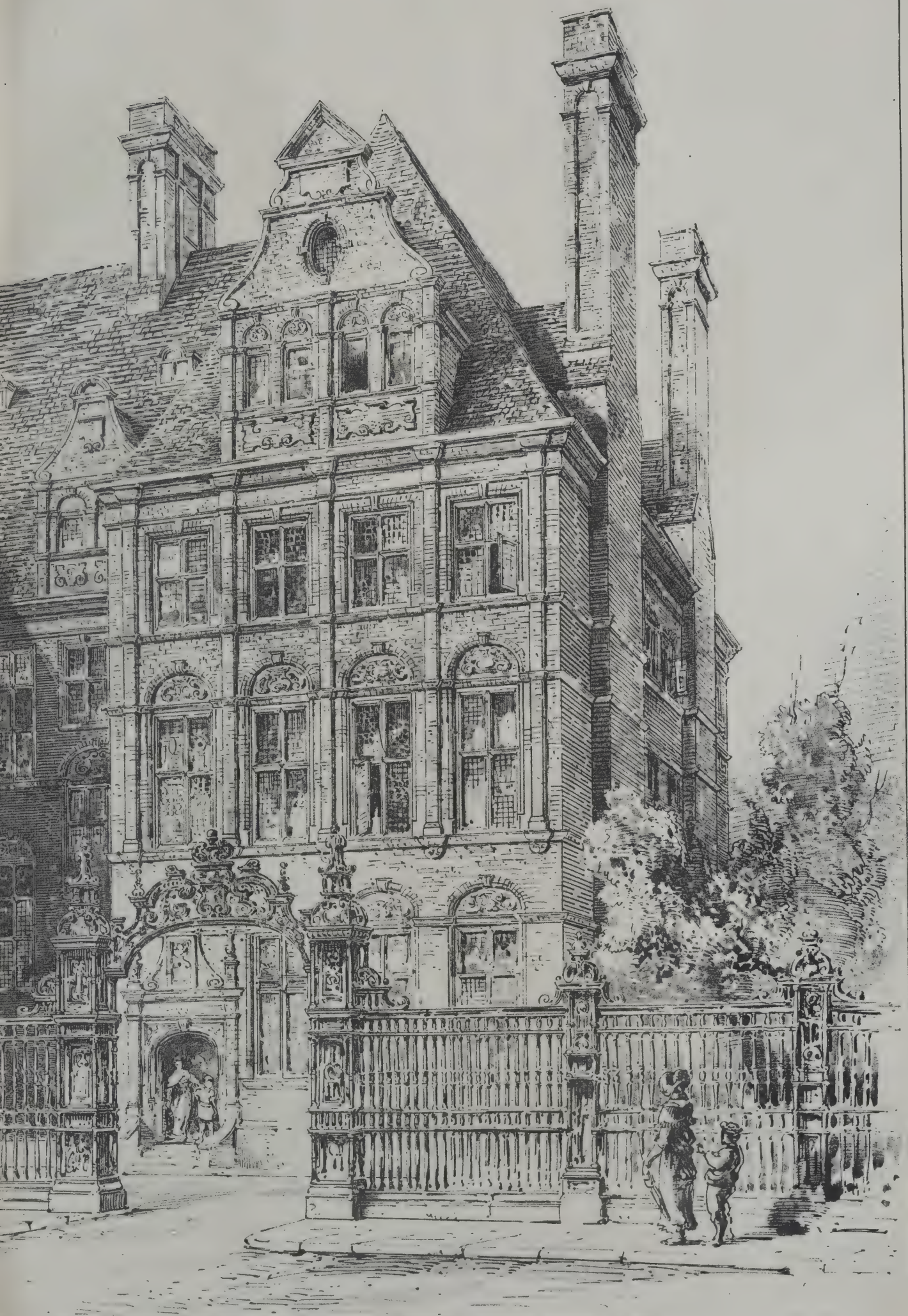




HARRINGTON GARDENS  
for W.R. CASSELS ESQ.  
ERNEST GEORGE & PETO ARCHTS







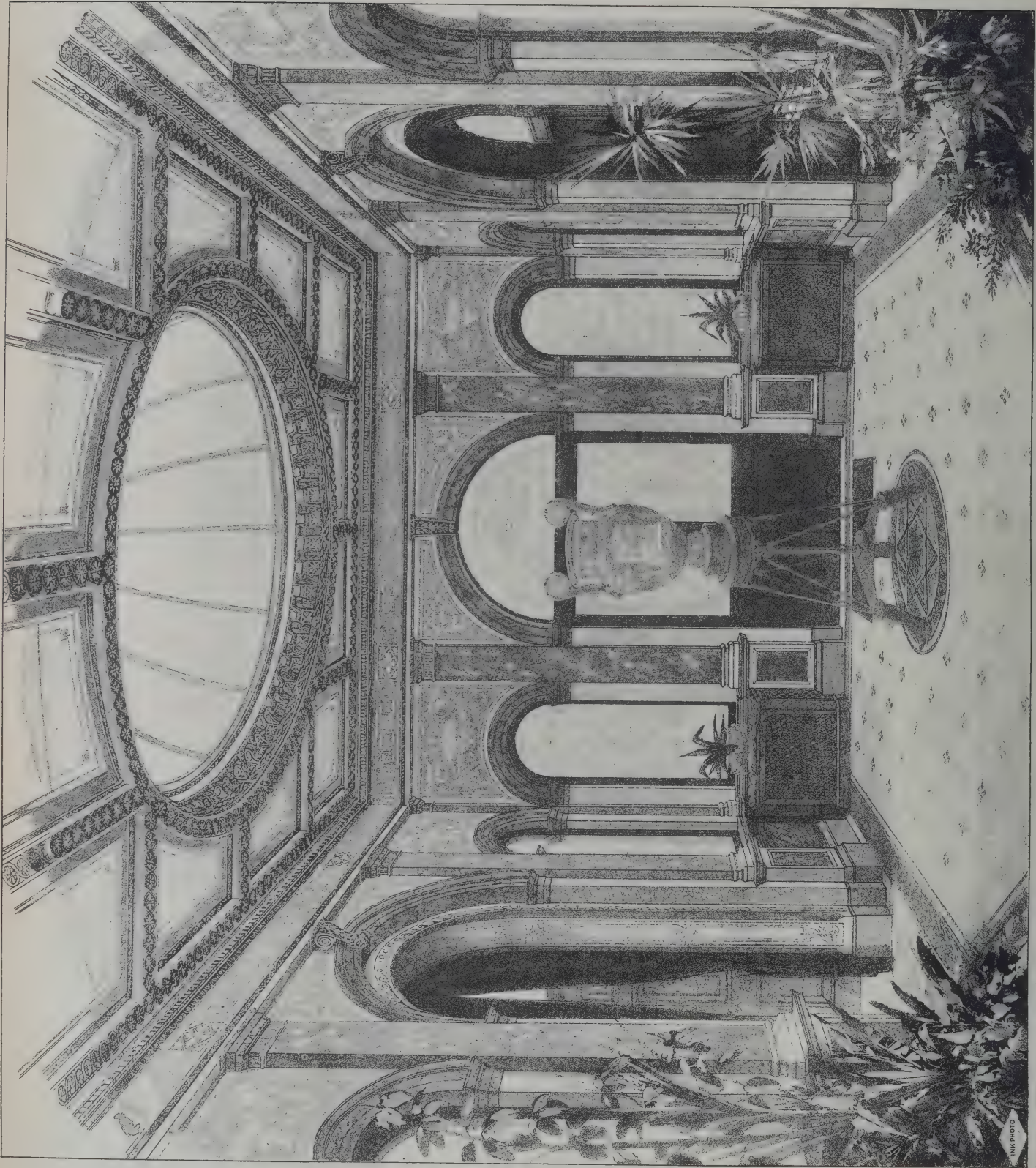












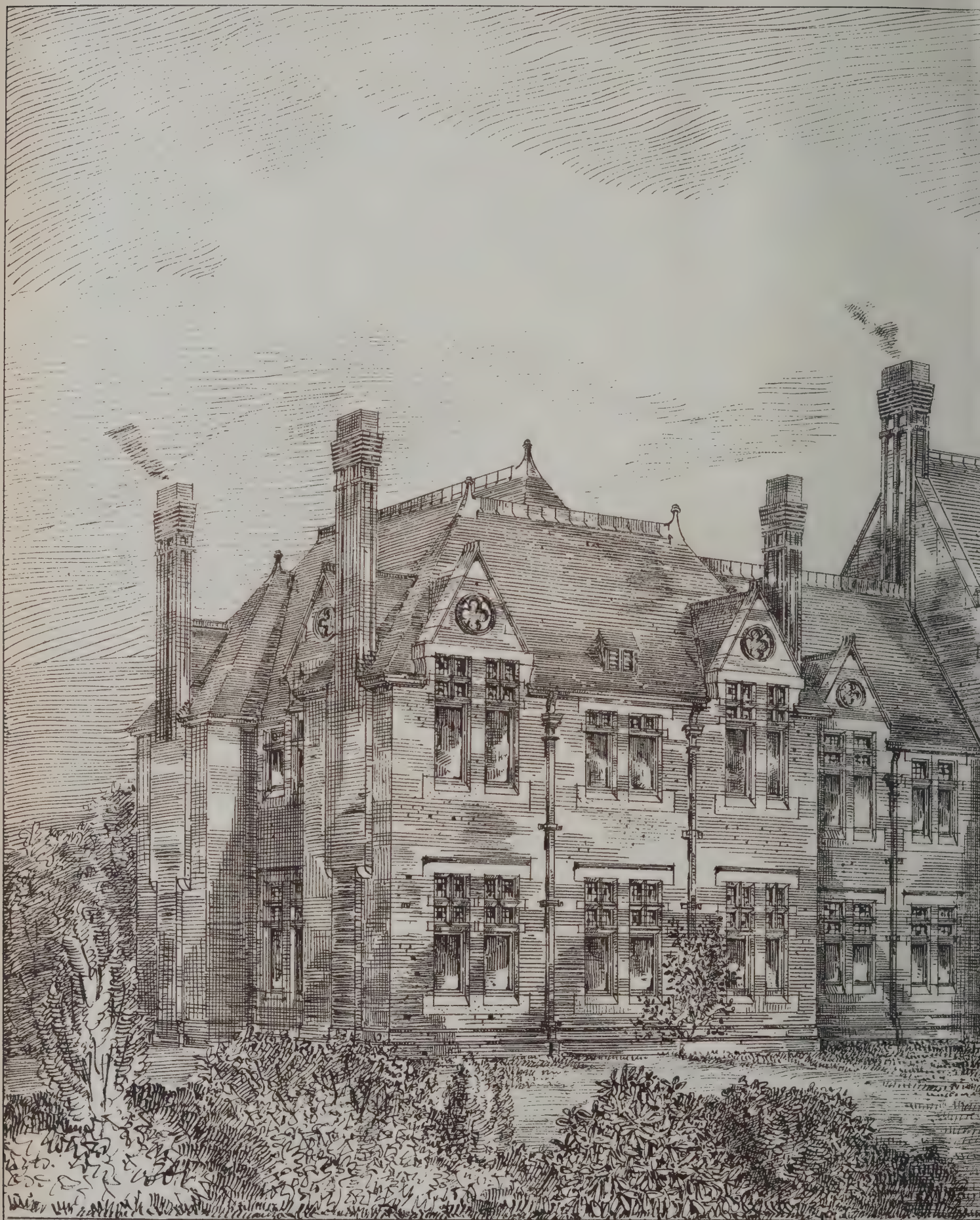
DESIGN FOR DECORATION OF VESTIBULE, SHERWOOD, TUNBRIDGE WELLS.  
BY LEWIS P. CRACE

Sprague & Co. 22, North Street, London, E.C.









Design by: Royal Masonic Institution for Boys' Work



Oct 21<sup>st</sup> 1882.

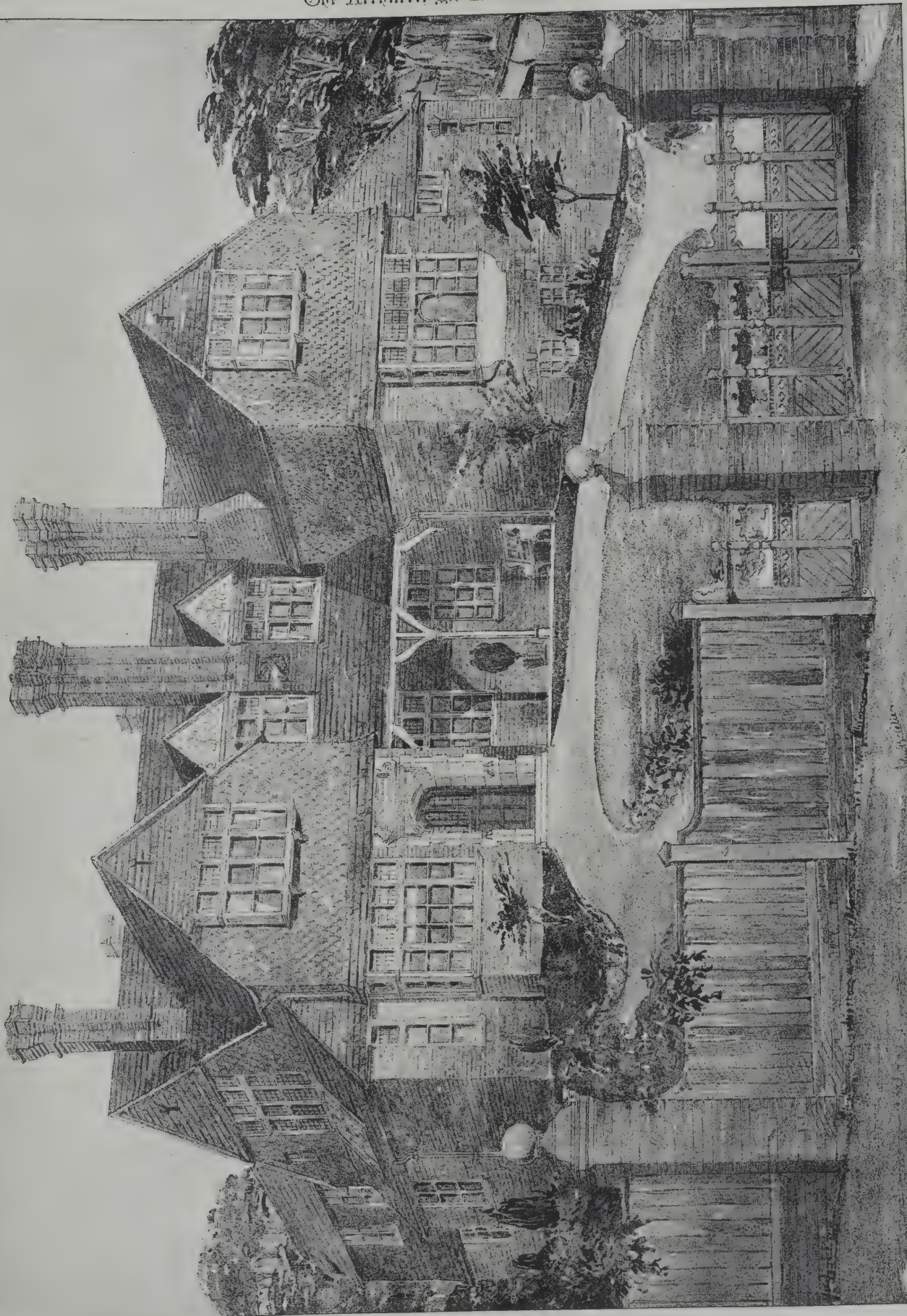


Green · London · N. Preparatory · School · Cross, Wells & Cross  
Architects









THE UPPER NORWOOD DISTRICT COTTAGE HOSPITAL.  
MESS<sup>RS</sup> JOHN & JOHN BELCHER, F.R.I.B.A., ARCHITECTS.







It may be taken as a capital illustration of the skill and resource possessed by the earliest wood-engravers, and it seems to settle once for all the principles which determine all manner of decoration for printed books. Of course the general qualities of art displayed in these designs are those which might only be expected in the period in which it was produced; but what we have now to remark is the fine tact and taste with which the execution is adapted to the purposes of book illustration. The lines, though few, are admirably chosen to give effect to the artist's purpose, and throughout his work he would seem to have been constantly mindful of the relation which his picture should bear to the cut letters of the text. It may, of course, be said that the style which I am here holding up for admiration was imposed upon the artist by the imperfect resources at his command, and that he would have come nearer to the modern view of the wood-engraver's craft had he possessed the necessary knowledge and experience of what can be accomplished. But this, even if true, cannot be held to affect the question we are discussing. The world of art is not an arena for the exercise of feats of manual dexterity, and the greatest artist is not he who encounters and conquers the greatest difficulties, but who most willingly submits himself to the obvious conditions which the particular style of design imposes. To my mind, the most elaborate and intricate specimen of wood engraving which our modern times have produced compare but poorly with the simple and abstract qualities displayed by the engraver of the "Ars Moriendi"; and I believe that many of the failures which have overtaken modern art are due as much to the temptation which is afforded by increased facilities in technical practice as to any other cause.

There are many other of the block-books which, if time allowed, would be worth description and study; but their use to us on this occasion lies in the fact that they mark a particular epoch in the development of book illustration. The last of them, which is also to be seen in the British Museum, was produced in Venice in the year 1510, and is the work of Giovanni Andrea Vavassore. It is more elaborate in character than the "Ars Moriendi," and in the picture design there is a more ambitious attempt to secure fuller effects of light and shade. It anticipates, in a measure, the next revolution in the art of publication, consequent upon the invention of movable type. This invention at first seems to have exercised a depressing influence upon the practice of wood-engraving.

The cutting from the letters for the text had no doubt formed an important part of his business, and the introduction of typography of necessity deprived him of a valuable means of subsistence, but the decline was but temporary. Under the protecting influence of the printing-press, the wood-block rapidly acquired increased prominence, for it became the means of circulating engraved designs throughout every part of civilised Europe.

To follow the subsequent fortunes of engraving in wood would require a separate consideration of the art of Italy and the North; but it may be said, generally, that as Germany had been the first to encourage the engraver's art, so also it produced, in a more mature period of its development, the finest and most interesting specimens. It has been sometimes doubted whether Albert Dürer was himself an engraver on wood, but it is certain his great genius must have powerfully influenced the practice of this branch of art. No man ever possessed a finer instinct for the varying conditions under which his designs were to be reproduced; his mode of technical execution for engraving on copper has been a model to all the world since his time, and in like manner he exhibited an equal judgment in the management of designs destined for reproduction on wood.

Many of the wood-blocks executed at this time far exceeded the limits of book illustration. Such, for example, are the series of designs by Dürer for the triumph of Maximilian, who was himself a constant patron of this branch of art. At the same time wood-engraving received a new development by the invention of the system known as *chiaroscuro*, of which the earliest example is found in the reprint of the "Repose in Egypt," by Lucas Cranach. This mode of engraving, which consists in the use of two or more blocks, so printed as to imitate the effect of a washed drawing, may be taken as indicating a new departure in the wood-engraver's art. It marked the first attempt to make wood engravings a means of reproducing pictorial effect, and although in itself sufficiently simple, it may be reckoned as the source and origin of the many modern efforts in the same direction. In fact, in its modern application, wood-engraving has almost ceased to possess distinct claims of its own. It is employed as a means of reproducing drawings in wash or colour, or to imitate the free and careless handling of a pen-and-ink sketch. The result has been that the wood-block has lost its distinctive character of fitness for its place in a printed volume. It is true that the earliest wood-blocks were *fac-simile* reproductions of an artist's design; but then the artist laboured with a definite view of the process by which his work was to be translated, and of the place it was destined to fill. He preserved in his design something of the abstract character that belongs to printed type; the lines by which he expressed his thought were few, simple, and severe; he sought for no suggestion of colour, nor did he strive for great depth or variety of light and shade. It is a characteristic of all early engravers, a characteristic specially marked in the early wood-blocks, that they are founded

rather upon the principles of sculpture than of painting. The light and shade are evenly balanced over the whole composition, subtleties of local colour are neglected in favour of a clear, sharp definition of broad effect, and the result appeals more by beauty and balance of form, and by truth and simplicity of character, than by laboured difficulty of executive skill. It may perhaps be said that wood-engraving of this earlier and nobler kind reached its highest perfection within ten years of the time of Dürer's death.

The "Dance of Death," which may be taken, all things considered, as the very finest specimen of the art in existence, was published at Lyons in the year 1538; and Holbein's designs to the volume may be taken to sum up in a form of supreme excellence those principles in the engraver's art that had been gradually developing themselves in the previous hundred years.

In the mass of work now produced there is very little trace left of the principles upon which Holbein laboured. Instead of proceeding by the simplest means, our modern artist seems rather by preference to take the most difficult and complex way of expressing himself. A wood engraving, it is not unjust to say, has become scarcely distinguishable from the steel engraving, save by its inferiority. It strives after equal complexity of colour and tone, although the resources at the command of the artist are by no means fit for the attempt. When it appears in a printed volume the modern woodcut looks for the most part like an unsightly stain upon the page. It bears no relation to the text which surrounds it, and which it is assumed to illustrate. The heavy mass of deep tone seems to make a hole in the page, and however we may admire the quality of the work judged apart and on its own merits, we are bound to confess that it has been produced without consideration of the conditions under which it is to appear.

The original cause of this decline in the art has been already indicated. Envy of the effects proper to another mode of expression is the death of every art. Literature cannot reproduce the beauties proper to painting or design. Sculpture, whatever claims of its own it may possess, is powerless to give us the glow and colour of a Titian; and in like manner the wood-engraver, so far as he sought to place himself in competition with the engraver on copper, found that he was parting with the beauties peculiar to his own craft without securing those that belong to another. During the latter part of the seventeenth century the art may be said to have reached its lowest point, and the only book illustration of the eighteenth century that deserves much consideration consists of delicate copper-plate engravings produced by the French artists of the time.

These steel plates, it must be confessed, are often most skilfully introduced into the text, so as almost to produce the impression that they belong to the same process of printing; but I do not propose, whatever their merits, to discuss this class of illustrated books this evening.

Book-illustration as an art, as I have already said, is founded upon wood-engraving, and it is to wood-engraving we must look if we are to have any real revival of the kind of beauty which the early-printed books possess.

If we look back, then, upon the condition of wood-engraving during the period of its prosperity, we shall find certain clearly-marked characteristics which specially fit it for association with printed books. We find, in the first place, that the artist, partly perhaps from limited resources, but much more from innate and trained sense of the requirement of his task, constantly preserved such a simplicity in his workmanship that the result found happy companionship with the printed page. With the example of the illuminated manuscript still fresh in memory, he treated the page of a printed book as an entire composition into which the picture was not to overbalance or oppress the remainder.

#### RUBENS' "DANIEL IN THE LIONS' DEN."

THE high price given for the painting of *Daniel in the Lions' Den* at the sale of the Hamilton Collection has been the means of attracting attention to two similar works in Godshill Church, Isle of Wight, and in the Archers' Hall, Edinburgh, both of which are claimed to have been painted by Rubens. Mr. J. C. Robinson has examined the two pictures, and he is convinced that they are only simple copies from the Hamilton picture, and not *repliche* by Rubens or by pupils working under his direction.

"It is on record," says Mr. Robinson, "that Rubens himself stated to Sir Dudley Carleton, the English Minister in Flanders, that the *Daniel in the Lions' Den* was executed entirely by his own hand. Doubtless it was so, and all appearances lead me to the belief that the Hamilton picture is the one so produced. Carleton's testimony is very significant, and it is especially indicative of the early date of the picture, for ultimately Rubens, in his more important works, nearly always largely availed himself of the assistance of pupils. The picture in Godshill Church, in the Isle of Wight, is obviously the earlier in date of the two copies. From sundry indications I infer that it is an old English copy, made not long after the importation of the original, in the time of Charles I. The example in Edinburgh, on the other hand, which seems to have been given to the Archers' Company in 1788, bears the impress of that period, and it was probably made from the picture at Hamilton some time during the second half of the eighteenth century."



## NOTES AND COMMENTS.

THE Improved Wood Pavement Company was authorised about a year ago to lay down, as an experiment and at its own expense, a pavement of wood blocks in the Rue Montmartre and the Boulevard Poissonnière, two of the most crowded thoroughfares in Paris. The city engineers have reported so favourably respecting the new pavement that the municipal authorities have just given an order to the same company for the paving of the entire length of the roadway of the Champs-Élysées, from the Place de la Concorde to the Rond Point. The preliminary works necessitated by the change have already been commenced, and the laying down the blocks will begin next month. It is expected to be entirely finished by March 1, and will be executed in longitudinal sections, so as to interfere as little as possible with the traffic of the finest roadway in Europe.

M. BONNAT is now working on his picture of the *Martyrdom of Saint-Denis*, which has been ordered by the Government, at the price of 20,000 francs, for the Panthéon. It will be probably exhibited in next year's Salon. Among other commissions given for the adornment of the same building may be mentioned that to M. GALLAND, Professor of Decoration at the Ecole des Beaux-Arts, for a picture of *Saint-Denis Preaching*—20,000 francs; a statue of *The Virgin*, to M. PAUL DUBOIS—15,000 francs; and a statue of *Sainte-Genève*, to M. GUILLAUME, at same price. M. MEISSONIER some years ago received a commission from the State to paint the *Last Moments of Sainte-Genève* for 50,000 francs; but he has not commenced it, so that, as a matter of fact, the work may be considered abandoned.

WHILE speaking of orders given by public bodies, we may mention those received by M. MOROT for the Academy Palace, the Hôtel de Ville, where he is to execute a *Dance of the Nymphs* on the ceiling of the large Salle des Fêtes, and for the Musée Lorrain at Nancy. For these works the artist is to receive 90,000 francs, two-thirds of which is found by the State and one-third by the town.

THE authorities of the City and Guilds of London Technical Institute have acted wisely in instituting a series of forty lectures upon the Art of Furniture. Up to the present science appears to have monopolised the attention of the Institute. The lectures will be delivered by the Head-master of the department, Mr. ANDREW F. BROPHY, and will deal with the most interesting styles. Unlike many other teachers on similar subjects, Mr. BROPHY possesses a practical knowledge of the subject. His designs have been sought after by many of the principal firms in London, and his remarkable success at South Kensington is evidence of his mastery of the theory of industrial art. The lectures will be most useful to men who are engaged in the different furniture trades, and it may be added that they cannot fail to be attractive to the general public.

AMONG MESSRS. CROSBY LOCKWOOD & Co.'s forthcoming books will be a new edition, re-written and enlarged, of Mr. LOWIS D'A. JACKSON'S "Hydraulic Manual," consisting of Working Tables and Explanatory Text; a new and enlarged edition of Mr. MICHAEL REYNOLDS' "Stationary-Engine Driving," a Practical Manual for Engineers in charge of Stationary Engines; and the following scientific and technical works in their popular "WEALE'S Rudimentary Series":—"Land Drainage," its Theory and Practice, by Professor SCOTT; "The Smithy and Forge," including Coach Smithing, Farriers' Work, &c., by W. J. E. CRANE; "Details of Machinery," comprising Instructions for the Execution of Various Works in Iron, in the Fitting Shop, Foundry, and Boiler Yard, by FRANCIS CAMPIN, C.E.; "The Metallurgy of Iron," containing Outlines of the History of Iron Manufacture, Methods of Assay and Analyses of Iron Ores, Processes of Manufacture of Iron and Steel, &c. &c., by H. BAUERMAN, F.G.S.; "Plumbing," a Text-book to the Practice of the Art or Craft of the Plumber, with chapters on House Drainage, embodying the latest improvements, by W. P. BUCHAN; "Quantities and Measurements," with Rules for Abstracting, Hints for preparing a Bill of Quantities, and Prices for all work in the Building Trade, by ALFRED CHARLES BEATON, with prices revised to the present date.

THE classes and ateliers of the Ecole des Beaux-Arts have been reopened during the past week. The number of students entered on the books of the establishment exceeds that of any previous year, being 1,130 in all—viz., 661 in the architectural section, 285 for painting, and 184 for sculpture.

A LONG-NEEDED improvement is about to be introduced at the Louvre. A few of the rooms bear their denomination on medallions over the door of entry, and it is now proposed to extend this system throughout, so that visitors will no longer be obliged to wander about in fruitless search of a particular collection. In the block known as the Colonnade the rooms that are to be added to the old Musée des Souverains are now being decorated and repaired. A large number of statuettes, articles of pottery, &c., found recently by the various foreign expeditions sent out by the French Government, are already provisionally installed in this part of the building, and are open to the public during certain hours of the day. The most noteworthy articles are those illustrative of the Chaldeans.

SIR G. B. AIRY, who has but lately resigned the office of Astronomer Royal, which he held for more than a generation, has raised objections against the design for the proposed Forth Bridge. In the first place, he doubts the stability of the cantilevers, which are 675 feet in length, and project over the Forth without any support. These form the support of 350 feet of railway, which rests on the tips of the brackets. There are no precedents for such cantilevers. According to a calculation of Sir GEORGE AIRY'S, the tension on both the upper and lower booms increases from 1,004 tons near the extremities to 3,674 tons near the piers. He apprehends danger from so great a force acting endways, as it does. The effect is likely to lead to buckling, which has before now proved fatal to several structures. Lastly, it is said that the liability of the bridge to ruinous disturbance from the force of the wind acting with the leverage of the long brackets is alarmingly great. Both Mr. FOWLER and Mr. B. BAKER, the engineers of the bridge, have had much to do with iron structures, and they will no doubt be able to make out a case for their design; but the censures of so eminent a mathematician as Sir GEORGE AIRY demand attention from the directors and the public.

NICOLAS LORIN, the celebrated painter on glass, died last week at Chartres, his native town. A list of even his principal works would be too long for publication here, but we may mention the following places where specimens of his remarkable work may be seen:—Chartres, Bourges, Paris, Saint-Denis, Vincennes, Rouen, Sens, Lyons, Auch, Troyes, Dijon, Nevers, Rheims, Amiens, Canterbury (England), Heligenkreuz (Austria), Brussels, New York, and finally Monaco, where the great palace window, representing the *Jugement de Sainte-Devote*, is considered a masterpiece of glass-painting. Just previous to his decease M. LORIN had been chosen by the special committee appointed for the purpose to execute from his own designs the *Jeanne d'Arc* windows destined for the Orleans Cathedral.

MR. J. T. WOOD says that in spite of the desolation of Ephesus much remains on the site of the temple to interest a visitor. He mentions the several courses of beautiful marble masonry of the south and west walls of the cells of an earlier temple, which were made to serve for the foundations of the last temple; also the foundation piers of the great columns, and the whole of the marble pavement of an earlier temple, which was probably built in the time of CRÆSUS, who contributed largely to its cost. A portion of this pavement on the south side has been uplifted by an earthquake with a large mass of the mortar, which was in use at the time for building a church or some other large building within the cella of the temple. There is also to be seen on the north side of the site and at the east end 100 feet of the lowest step of the platform upon which the temple was raised. Then there are countless drums of fluted columns, altogether making a most interesting though not an imposing ruin. Mr. WOOD'S excavations have hitherto extended to the inner side of a colonnade which surrounded the temple. He is now endeavouring to raise funds by private subscription to extend the exploration beyond the portico, when it is reasonable to expect that much of the beautiful sculptured frieze and superstructure of the temple will be found.



## ILLUSTRATIONS.

## HARRINGTON GARDENS.

THE mansions shown in the illustration are the latest additions to Harrington Gardens, South Kensington. They are of red brick with red tiled roofs. The houses are set back from the path to obtain a drive, so that a carriage may be entered without the usual walk across the public footway. A small court open on one side is formed between the houses, lighting the staircases. The court will be brick paved, and will hold myrtles, &c., in tubs. On the ground-floor of the larger house is an arcaded porch beside the open court. A dining-room, which is oak pannelled to the ceiling (the ceiling showing the moulded joists); and the drawing-room, which is 40 by 18, with three bay windows; a library of the same size being above it, also with three bays. These rooms look towards the gardens. The billiard-room occupies the north side of the first floor. The drawing-room is to be panelled up to the top of the doors, and will have a hooded stone chimney-piece in the Early Renaissance manner. A fine carved oak staircase occupies one end of the entrance hall. With the smaller house, the dining-room and morning-room occupy the garden front, while a smoking-room and a panelled hall, low of pitch, occupy the north side of the house. Above this hall is the drawing-room, square on plan and lofty, as shown by the long mullioned windows. This room has a balcony upon the court. The architects of the buildings are MESSRS. ERNEST GEORGE & PETO. The contract was taken by MESSRS. STEPHENS & BASTOW at 13,272*l*.

## NORWOOD COTTAGE HOSPITAL.

THE above hospital, situated in the Hermitage Road, is to be opened by the Lord Mayor, Sir JOHN WHITTAKER ELLIS, to-day (Saturday), under the presidency of Mr. GRANTHAM, Q.C., M.P.

It has been erected to accommodate fifteen patients, having four wards of three beds each and three separate rooms. On the ground floor is a spacious dayroom, from which the wards and offices open out. The position of the matron's and nurses' rooms enables them to overlook two wards each.

Each ward is provided with bathroom, hot and cold water, w.c., sink, &c. The sanitary arrangements have received special attention, and are in accordance with the latest improvements.

Electric bells with proper indicators have been fitted up throughout by Mr. GEORGE PORTER, of Fenchurch Street; a flexible cord with push at end being placed for the use of each patient. The ward doors have Messrs. KAYE's locks, by which they are opened and shut noiselessly.

The general appearance of a public building has been avoided as far as possible, and homelike comforts and snugness considered.

The works have been well carried out by Messrs. GARNHAM & SONS, builders, of Westow Street, Norwood, from the designs and under the superintendence of Messrs. J. & J. BELCHER, of 5 Adelaide Place, E.C.

## NEW VESTIBULE, SHERWOOD, TUNBRIDGE WELLS.

THIS illustration has been reproduced from a coloured drawing exhibited at the Royal Academy this year. The architectural features of the interior are of various coloured marbles, and the work, together with other additions to the house, was recently executed for Dr. SIEMENS, F.R.S., by Messrs. WILLICOMBE & OAKLEY, builders, of Tunbridge Wells. The drawing, which shows a scheme for the colour decoration, was executed by Mr. LEWIS P. CRACE, A.R.I.B.A., of 71 George Street, W., from whose designs the work was carried out.

## DESIGN FOR PREPARATORY SCHOOL FOR BOYS, WOOD GREEN, N.

THIS design was prepared in accordance with conditions recently issued by the chairman and members of the House and Building Committee of the Royal Masonic Institution for Boys.

The drawings provide accommodation for 150 boys, and include, on the ground-floor, a central entrance hall and staircase, communicating on either side (by a wide corridor running the entire length of the building) with class-rooms, teachers' rooms, dining-room, matron's, sitting and store rooms, visitors' room, &c., and a dining-hall. The boys' dormitories, &c., are placed on the first floor, and the second floor of the central block contains sleeping accommodation for the servants.

The fronts are intended to be faced with Fareham red bricks, with dressings, &c., of Tisbury stone, and the roofs covered with Bangor slates; the internal joiners' work to be in pitch-pine.

The cost of the building and outbuildings, including enclosing fence, play-sheds, gymnasium, &c., is estimated at 20,000*l*.

MESSRS. CROSS, WELLS & CROSS, of No. 70 Chancery Lane W.C., are the authors of the design.

## SCOTTISH ARCHÆOLOGY.

ON Monday the annual Rhind Lectures on Archæology were resumed in Edinburgh. The subject selected is "Scotland in Pagan times—the Bronze and Stone Ages," and Dr. Joseph Anderson is again the lecturer.

In the opening lecture Dr. Anderson referred to the remains which had been discovered of the burials in Scotland during the bronze period. During two seasons—August 1876 and 1877—he had been present at the excavation of a large cairn in a field near Collessie. It was a mass of gathered stones covering an area of about 120 feet in diameter, and rising in the centre to a height of about 14 feet above the natural level. Commencing on the south-east side, a width of about 8 yards, extending all through the cairn from side to side, was excavated and cleared out down to the sub-soil. The bulk of the cairn was then found to consist of rolled stones apparently gathered from the surface of the surrounding area. The mass of the cairn was simply agglomerated, not built, or placed with any visible arrangement except in one feature. That feature, however, distinctly indicated arrangement with a purpose. A few feet within the exterior of the cairn there was a ring of sandstone slabs, set on edge, close to each other. The ring was traced for fully one-third round the base of the cairn. These slabs were from 3 to 4 feet high. The level space within the incomplete circle from which the mass of the cairn had been removed presented a remarkable appearance. It was covered with a layer of fire-clay varying in thickness from 1 to 3 inches. The surface of this clay bed was mottled over with marks of fire at separate spaces. In these spaces the ashes and charcoal of wood could be gathered in handfuls, and the whole surface of the side of the cairn, so far as it was laid bare, was more or less strewn with ashes and minute particles of charcoal. These appearances were to some extent explained by the fact that there were cremated burials in the soil underneath the cairn, which in all probability were placed there previous to the construction, or at least prior to the completion, of the cairn. In the cairn itself was found but one burial. It was enclosed in a cist of slabs placed on the natural surface of the ground, a little beyond the centre of the cairn to the south-west. The cist was of four-sided stones set on edge. The space it enclosed was 4 feet 6 inches long, and 3 feet wide in the centre. The appearance of the bottom of the cavity was peculiar—a layer of perfectly clean-washed angular gravel, nearly all of a size, with no admixture of clay, sand, or earth. Below it was the sandy gravel of the subsoil, in and on which a few small portions of the unburnt bones of a human skeleton were found in a condition of extreme decay. Near the west end of the cist, and therefore placed either behind the shoulder or before the face of the corpse, a tall, handsomely-shaped and finely-made urn of clay lay on its side. It stood 9 inches high and 6 inches across the mouth. It was graceful in shape, narrowing slightly below the brim; and, swelling to its greatest width at about half its height, it narrowed again to a diameter at the bottom of about 4 inches. Although made without the aid of a wheel, it was almost regular in its outlines, with band ornamentation produced by the impressions of a tool with closely-set teeth like those of a comb. This one burial was all that was discovered in the cairn, and was apparently the burial for which the cairn was constructed. It was an unburnt burial, and no relics were associated with it except the urn. But the cairn presented the singular feature, which, so far as his experience went, was unique in Scotland, of having been erected over a site in which there were burials underground. Beneath the cairn was a pit about 4 feet by 3 feet, and 6 feet deep, in the bottom of which were found the broken fragments of an urn of the same form as that found in the cist, but smaller; of the same texture, and similar ornamentation. In another pit, which had been excavated to a depth of 4 feet under the natural level, there appeared a layer of burnt bones about an inch in thickness, spread over a space of 3 or 4 square feet. Among them he recognised portions of a human skull and vertebral column. There was no appearance of an urn, but among the bones lay a finely-made, thin, and tapering blade of bronze, still bearing on its broad end the holes through which it had been riveted to the handle. Close by it was found the gold mounting of the butt end of its handle. He described this cairn and its associated burials thus minutely because it was the only cairn of the bronze age which he had seen excavated. Many others had doubtless been met with, but the instances in which the phenomena of the burials and the features



of the structure had been specially investigated and placed on record were exceedingly few, and the details were of the most meagre and unsatisfactory description.

Dr. Anderson next compared similar cairns found at Cairn Greg, Linlathen, at Cleigh, Argyshire, and at Glenforsa, Mull, in each of which the central burial had been accompanied by a bronze dagger, the last-named cairn containing, besides the dagger, two urns and a "bracer" of polished stone. This polished stone was thin and rectangular in form, with slightly rounded corners, and pierced by a small hole in the middle of its breadth, close to each end. The association in other quarters of this peculiarly-formed stone object with arrow-heads of flint was suggestive of its connection with the use of the bow, and the fact that the braces of bone, which in mediæval and modern times were strapped on the left wrist to protect it from the recoil of the bow-string, were curiously like these stone objects, had given force to the suggestion. All these interments, the lecturer pointed out, differed in a marked manner from those described in the previous course of lectures. These were characterised by the presence of weapons and implements of iron and ornaments of silver, bronze, or brass. In the interments now under consideration the deposits of grave goods were much more limited in quantity and much less varied in character. No metal usually appeared but bronze, and that only in a single form—a flat triangularly-shaped blade, remarkable for its thinness, and peculiar not only in its form but in the manner in which it was attached to the handle by rivets. Instead of stone urns, which were associated with the iron age interments, they had urns of clay, of a special form and peculiar ornamentation. They were therefore dealing with a typical form of burial. It separated the burials in which it occurred from the typical burials of the iron age on the one hand and the typical burials of the stone age on the other. It separated them from the burials of the iron age, because it had never been found either with implements of iron or with objects exhibiting special forms, or bearing the special ornamentation of the iron age. It separated them from the burials of the stone age, because it was itself of bronze; and though it was associated with implements of stone, it brought these stone implements and the burials with which they were associated into the category of bronze age types. Dr. Anderson proceeded to notice a series of burials still characterised by the presence of a thin blade of bronze, the blade presenting certain differences of form and character, and being associated with a typical form of urn which indicated the practice of cremation. These included burials discovered at Lockerbie, Balblair, and Rogart, in Sutherlandshire; Penicuik; and Burreldales, Aberdeenshire. Occasionally, he said, such burials as these were found associated in groups, implying the use of the site as a family or tribal burying-ground. The deposits they contained were totally destitute of iron, and the only cutting implements they contained were made of bronze, this being their most peculiar feature. They had thus passed a phase of culture familiar with the use of iron and silver to a phase of culture familiar only with the use of bronze and gold. He also described a series of cemeteries disclosing urn burials after cremation found at various times at Lawpark, St. Andrews; Magdalen Bridge, Joppa; Alloa, and other places, in which implements or ornaments of bronze were found among the burnt bones; the Alloa cemetery, from which twenty-two urns were obtained, also contained in the cist which enclosed the skeleton two penannular armlets of gold, together weighing five ounces. In one cist in Forfarshire were found a small triangular flint knife, a bronze pin, and a curious necklace of jet or cannel coal. In the whole series of these burials they marked the presence of a set of phenomena that were unlike the phenomena of any other series of burials within the same area. They were characterised by the absence of iron and silver, and the presence of bronze and gold. The bronze was present in these deposits in the same character as iron was present in the deposits of the iron age as the only material for cutting instruments. It was not abundant; the only objects met with were small, and presented but little variety of form and character. Yet they were neither rude nor unshapely implements. On the contrary, they exhibited a remarkable fineness of form and delicacy of finish, implying extremely skilful and careful workmanship in every step of the complicated processes of their manufacture. These thin, triangular blades of bronze were as beautifully cast and finished as any modern founder could wish. They were neatly fitted to their handles of wood, and solidly fastened by rivets. The handles were sometimes decorated with mountings of gold, ornamented in *repoussé* work. The oval blades were even more skilfully made and more delicately finished. Their edge rivalled in its keenness the edge of a razor, and some of the forms of the blade had been found capable of shaving, and this purpose attributed to them. The urns themselves presented a wonderful variety of graceful forms and appropriately simple but effective ornamentation. They were not wheel-made, but many of them were so regularly symmetrical in their outlines that it was difficult to suppose they had not been moulded on the wheel. With these finely-ornamented urns there were associated armlets of gold and necklaces of jet, and beads of amber and variegated glass. The gold armlets were massive and well made, and could not fairly be called rude or inelegant. The jet necklaces of beads

and plates were elaborately constructed and carefully ornamented with punctuated patterns, which contrasted fitly with the polished surface of the material. Intrinsically all these variously fabricated objects were evidences of the capacity and culture of the men who made them. But as they found them all in associations which showed that they were grave goods devoted to the dead, they saw that they were also evidences of the piety and affection which thus expressed itself in the manner of its time.

## ALTERATIONS AT OXFORD.

ACCORDING to custom, the *Oxford Chronicle* publishes a list of the alterations and improvements that have taken place in Oxford during the past year, from which we take the following.

### The Old Schools.

This fine pile of buildings—including Bodley's Library—has been undergoing thorough restoration during the last five or six years, at a cost defrayed by the Curators of the University Chest, under the direction of Mr. T. G. Jackson, architect, Devereux Court, Temple, London. The Library, round which the Schools are grouped, was finished by the donor in 1598, and formally opened by the donor in 1602. Bodley himself died ten years afterwards, and was buried in Merton Chapel. About this time the Schools were begun, Thomas Holt, a native of York, being the architect, and he was at his death interred in Holywell Cemetery, where so many notable men connected with the University have been buried. To Holt belongs the honour—if honour it may be called—of having introduced the Classical orders of architecture in a series over each other in the same building. The central tower of the Schools is the most famous—if not a unique—specimen of this kind of work in England, and this prominent object has just been restored in a very complete and careful manner. The tower from the pavement to the top of the angle pinnacle is 110 feet high, or to the top of the octagon turret, 117 feet. Its width from east to west is 31 feet, and from north to south six inches less, so that it is nearly square. The west front is most important, composed as it is of the five orders of architecture, with Elizabethan ornamentation, the columns rising above each other in pairs on either side. This has now been completely repaired, and as Clipsham stone has been used for the purpose, it is hoped that the weather will have little effect upon the new work. Every detail of the old structure has been minutely copied stone for stone, and wherever it was possible the work of the former restorer has been retained. This has been rendered still more easy from the fact that Bath stone was used in those portions of the work which have been allowed to stand. The parts untouched consist of six columns on the south side of the west front, a portion of the cornice of the upper order, the parapet, and pinnacles. The masonry is solidly laid in Portland cement.

The new Examination Schools, which have been erected from the designs of Mr. Jackson, were completed in May. They were described shortly afterwards in the *Architect*.

### The Indian Institute.

The work of pulling down the six old houses, excavating the ground, and laying the foundations of the future Indian Institute, at the east end of Broad Street, has been successfully accomplished by Messrs. G. Wyatt & Son, and the contract for the erection of the building has been undertaken by Messrs. J. R. Symm & Co., who have already commenced operations.

The architect is Mr. Basil Champneys, and the style of the building will be that commonly known as Jacobean. The angle formed by the junction of Holywell with Broad Street will be occupied by a turret surmounted by a lantern, which will contain the principal staircase leading to the basement below and to the library and museum above. On one side of this turret, facing Broad Street, will be the main entrance. The whole of the first and second floors towards Broad Street will be occupied by the library, which will, when completed, have a series of five oriel windows, while the upper floor will have the same number of smaller windows lighting the galleries. The front towards Holywell Street will be necessarily of irregular shape, and will be broken up into parts by two projecting features, which are intended to obviate the awkwardness of the site. The material throughout will be of Milton stone.

### New College.

Extensive alterations have been in progress at this college in remodelling and reorganising the kitchen wing, and its various offices. The original kitchen of William de Wykeham's foundation must have been a lofty and spacious apartment, but subsequent alterations and clumsy fittings, which may perhaps have been convenient in their day, sadly marred its fine proportions. These have been removed, and the kitchen restored to its probable former size. An entirely new system of cooking apparatus, with steam and hot water services, has been fitted up by Messrs. Jeakes & Co. The old larders and other offices have been replaced by substantial new buildings. The builder's work was executed by Mr. Holland, of Hurst Street, under the superintendence of Messrs. Wilkinson & Moore.



**Brasenose College.**

The buildings in course of erection at this College will take the place of two slightly-built and not well-planned constructions now standing in the kitchen or cloister quadrangle. By their removal, and that of some cottages and outbuildings, a spacious quadrangle, bounded on the east by the ante-chapel and cloisters, and on the west by the new wing, which is set a good way back, will be formed in the place of the present confined and irregular space. To the south, the new quadrangle is only separated from High Street by the houses and shops facing that street, and the buildings now being erected form part of a scheme for the quadrangle which will extend the whole distance from the old Brasenose buildings to High Street, and add one more to the series of collegiate and academical buildings with which that street is lined. The building will contain twenty-two sets of rooms for undergraduates, two large lecture-rooms, and a spacious set of rooms for a fellow. The old collegiate plan of disposing the rooms on separate staircases has been followed, but various conveniences in the way of sculleries and servants' offices are provided, which were unknown or disregarded when the older college buildings were designed. The foundations are laid at a depth varying from 14 to 20 feet, that being the depth of the "made" or artificial earth for the most part within the ancient limits of the city. In order to gain space enough for the new building it was necessary to demolish the greater part of Amsterdam Court, which occupied the site, and preserved the name of Amsterdam or Broadgates Hall, one of the numerous academical halls with which Oxford abounded during the Middle Ages, and especially before the existence of colleges. The walling of the new buildings is of Headington rubble, faced with Gibraltar rag stone, with dressings of Clipsham stone for strings, cills, weatherings, and mullions, and hard Doulting for the rest. The durable flagstone of Castlehill, near Thurso, will be used for the landings, and the stairs will be of hard Portland. The foundations and the walls, to the height of about 3 feet above ground, were put in by workmen under Mr. Mockford, the clerk of the works. The contract for the building above this level has been let to Messrs. Simm & Co., of Oxford, who have carried the buildings almost to the roof.

**Lincoln College.**

The new buildings from the north side of the space of ground known as "The Grove," at Lincoln College, bounded on the west by the older quadrangle of that College, and on the east by the back of Brasenose College, replace the old "Grove buildings," which contained eleven sets of small and inconvenient rooms, and which, although only built in 1759, had suffered so much from the action of the weather on the perishable local stone of which they were constructed as to have become dilapidated. The new building, now approaching completion, is designed by Mr. T. G. Jackson, and contains fifteen sets of rooms for undergraduates, and one set for a Fellow, besides making provision for some of the servants' offices. The depth to which it was necessary to go in order to secure a sound foundation has given opportunity for an extensive basement, which serves partly for cellage and partly for sculleries and servants' offices, a convenience unknown to the economy of older collegiate buildings. The basement contains also a new larder, reached by a subway from the college kitchen. The south front is faced with Handborough stone, and the north is of red brick, coursed with ashlar, the dressings throughout being of Clipsham stone. The stairs are of Portland, with landings of the extremely hard Castlehill flags from Caithness. The depth to which it was necessary to go for foundation, varying from 17 feet to 20 feet, affords a remarkable instance of the accumulation of earth within old towns. But it is still more remarkable that this accumulation of made earth seems to have been as great as at present in the fifteenth century. In joining the new building to the College Hall it was necessary to open one of the hall windows which had been blocked on the outside with masonry, and concealed on the inside by the panelling erected by Lord Crewe in 1701, at which time, probably, the other hall windows were converted into the present plain square-sashed openings. On opening this blocked window the original tracery was found behind it so complete that the whole of the design could be accurately recovered, a discovery of which, it is much to be desired, use may be made hereafter in restoring these beautiful windows to their original condition. The design of the tracery is very unusual and effective. The foundations and basement up to the ground-level were put in by workmen under Mr. Mockford, the clerk of the works. The contractor for the superstructure is Mr. Estcourt, of Gloucester.

**University College.**

At this college Messrs. Simm & Co. have restored several of the stone gables in the Radcliffe Quadrangle, which were found to be in a very dilapidated state. Taynton stone has been used. The same builders have also carried out extensive improvements in the drainage at Balliol, Merton, and Corpus Colleges, and the Radcliffe Observatory, from the plans of Mr. Griffith.

**Keble College.**

Further works of extension have been carried out at this college, and they are in a style corresponding with the rest of the

buildings, namely, red brick with Bath stone dressings. The additions comprise a bursary, steward's office, over both of which is a lecture-room 39 feet in length by 26 feet in width, and twenty sets of rooms for undergraduates, together with the necessary offices. The new buildings extend 131 feet in length by 30 feet in depth, and the lecture room is approached by a flight of Derbyshire marble steps. Messrs. Parnell & Son, of Rugby, who have been entrusted with the construction of the rest of the college, are the builders, Mr. Butterfield being the architect.

**Magdalen College.**

Considerable progress has been made with the new wing at Magdalen College, and the whole of the interior mason work has now been completed. The roof rafters are in position, and will be covered in almost immediately. The architectural features of the building are the oriel windows in the tower and those at the east and west ends of the High Street façade. It is proposed ultimately to erect three sides of a square, the fourth being occupied by buildings at present in existence, supplemented by a wall surmounted by an ornamental iron railing. However, only half the work is now in hand, and this comprises the whole of the frontage to the High Street in a line with the college buildings. This addition will provide thirty sets, lecture-rooms, and Fellows' chambers. At the south angle of the new buildings a tower will be erected, harmonising with that of the founder in the centre of the west side of the cloisters, which will rise to some 80 feet, beside decorated pinnacles. The chief entrance to the new quadrangle will be at the base of the tower, the archway and groining of the roof being in harmony with those in the founder's tower. The front extends about 200 feet from east to west, and the west wing will extend about 114 feet northwards. When completed the buildings will form a handsome addition to the present structure. Mr. McCulloch has carried out the carving most efficiently. Messrs. Franklin & Son, builders, Deddington, have been entrusted with the work. It is stated that the remainder of the extension scheme is likely to be taken in hand at once. The architects are Messrs. Bodley & Garner.

**A MÆDIEVAL VIGNETTE.**

AT the annual meeting of the Cumberland and Westmoreland Archæological Society, Mr. R. S. Ferguson, Mayor of Carlisle, read a paper on a "Vignette to a Charter to Carlisle." He said that in looking over the Royal Charters in possession of the Corporation of Carlisle, he fell in with a charming little vignette representing the siege of a walled town. It was mainly framed in the initial letter, the capital Chancery E of a charter of 9 Edward II., but two groups of figures were outside the frame. His pleasure in this trifling discovery was much enhanced on noticing that the chief of the defenders, a knightly figure in complete armour, bore on his shield the well-known arms of Sir Andrew de Harcla, thus proving that the scene depicted was his gallant defence of Carlisle in 1315 against Robert Bruce and the Scottish army. As the vignette itself and not De Harcla was the subject of the paper, he should only give a very brief account of that gallant and ill-fated soldier. He was Sheriff of Cumberland from 1 to 16 Edward II.; Warden of the Marches 8 Edward II.; created Earl of Carlisle 1321; and executed on a charge of high treason in 1325. The story of his arrest in Carlisle Castle by Sir Antony de Lucy, and of his subsequent execution on Harraby Hill, near Carlisle, was told in the Chronicle of Lanercost, and from that authority he quoted an account of the siege of Carlisle by Bruce, appending the translation in Jefferson's "History of Carlisle" as follows:—

"Very shortly afterwards in the same year, on the Feast of St. Mary Magdalene (July 22, 1315), the King of Scotland, having gathered together all his force, came as far as Carlisle, and surrounding the city besieged it for ten days, treading down the corn-fields and laying waste the suburbs and everything around, and burning the whole country; and collected for his army all the cattle they could steal from Allerdale, Coupland, and Westmoreland. On every day they made an attack on some one of the three gates of the city, and sometimes on all three together; but not with impunity, for darts, arrows, and stones, as well then as at other times, were cast down upon them from the walls in so great an abundance, that they questioned among themselves whether the stones did not increase and multiply within the walls. But on the fifth day of the siege they erected an engine for casting stones near the church of the Holy Trinity (the cathedral), where their king had placed himself, and continually threw great stones towards the Caldew gate, and at the wall, but did no injury, or but little to those within, except that they killed one man. There were, indeed, within the city seven or eight similar engines, with other warlike instruments, called springalds, for throwing long darts; and slings in sticks for casting stones, which greatly terrified and annoyed those who were without the city. In the meanwhile the Scots erected a great belfrey, in the manner of a tower, the height of which considerably exceeded that of the walls, which being observed, the carpenters of the city erected a wooden tower, which exceeded the height of the other, upon one of the towers of the wall, towards which that engine must have approached the



wall; but it never drew near to the wall, for when it was drawn upon wheels over moist and clayey ground, there it stuck by reason of its weight, nor could it be drawn any further, or occasion any inconvenience. But the Scots applied many long ladders which they had brought with them for the purpose of ascending the wall in the same manner in different places, and a sow for undermining the wall of the city, if they found it practicable, but neither the sow nor the ladders availed them anything. They also made bundles of straw and grass in great abundance to fill up the moat without the wall, on the east side, in order to pass over it dry; they also made long wooden bridges running on wheels, that being drawn forcibly and rapidly with cords, they might be carried across the ditch; but neither would the bundles, during the whole stay of the Scots there, fill up the moat, nor those bridges pass the ditch, but fell by their weight to the bottom. 'On the ninth day of the siege, when all the engines were ready, they made a general assault on all the gates of the town, and attacked valiantly throughout the whole circuit of the walls, and the citizens defended themselves as valiantly; and in the like manner on the following days. Moreover, the Scots employed a stratagem similar to that by which they took the Castle of Edinburgh—they caused the greater part of their army to make an assault on the eastern part of the city, against the place of the friars minors (the Grey Friars), that they might draw thither the party within, but the Lord James Douglas, a valiant and wary soldier, with certain of the more bold and alert of the army, posted themselves on the western side, over against the place of canons and preaching friars (the Black Friars), where, on account of the height (of the walls) and difficulty, an attack was not apprehended, and there erected long ladders, which they ascended, and they had archers in great numbers, who discharged their arrows thickly lest any one should raise his head above the wall; but, blessed be the Lord, they found such a resistance there, that they were thrown to the ground with their ladders, and there and elsewhere about the walls some were taken, some were slain, and others wounded. Yet no Englishman was killed during the whole siege, except one man struck with an arrow, and the one above mentioned, but a few were wounded. Thereupon, on the eleventh day, that is to say, on the Feast of St. Peter ad Vincula, the Scots, either because they heard of the approach of the English to raise the siege, or because they despaired of making any further progress, early in the morning returned into their own lands in confusion, leaving behind them all their warlike engines above mentioned. Certain English pursuing them took John de Moray, who in the before-mentioned battle at Strivellan had for his share twenty-three English knights besides esquires and others of lower rank, and received a great sum for their ransom. They took also, with the aforesaid John, the Lord Robert Bardolf, a man certainly of the very worst disposition towards the English, and brought them both to the Castle of Carlisle.'

Turning to the vignette, Mr. Ferguson said the artist had represented within the frame of the initial letter a walled town, Carlisle, and over the wall could be seen the roof and east window of the cathedral. Various turrets or towers rose from the wall, and one lofty one rose above the frame of the initial letter; this probably was intended to represent the castle. In the left hand corner outside the letter was a "*machina ad lapides jaciendos*." This must be the one the Scots erected on the fifth day of the siege "*juxta Ecclesiam Sanctæ Trinitatis*," that was the cathedral. It was clear to one having local knowledge that the scene depicted was the assault on the ninth day, "*contra locum canonicorum et fratrum prædicatorum*," that was the vicinity of the Sallyport, where the wall would be at least 30 feet high. He drew attention to some of the details of the drawing. The principal figure in the loftiest tower is Andrew de Harcla himself; he has already sent one spear through a Scot below; and is depicted in the act of hurling another. He described the arms and armour of De Harcla. But the spears have loops at about one-third of their length from the butt end; and Harcla, in the act of throwing the spear, grasps it in his hand, having his forefinger inserted in the loop. The Romans used a strap or thong tied to their spears; so did the Greeks. De Harcla wears a huge visored, conical-topped helm, much resembling No. 75 in the Institute's "*Catalogue of Helms*." It is surmounted by a panache or plume of upright feathers. Mr. Planché, in his "*Cyclopædia of Costume*" (*sub voce* "*Panache*"), said that prior to the reign of Henry V. panaches only appeared as heraldic crests. This was an earlier instance of a panache than those given in the works on heraldry, and it might either be a crest or a mere decoration. De Harcla also wears a 'sleeveless surcoat over a hauberk of banded mail. His sword, which has plain, straight quillons, hangs at his left side, the surcoat hanging over the waist-belt in most natural folds. On his left arm De Harcla carries his shield, which displays a plain cross containing in the dexter chief point a martlet. The martlet in this drawing is peculiar; it is not like those on the enamelled shield of William de Valence in Westminster Abbey (1296), but is sitting on a small twig. Next to De Harcla is a figure in surcoat and hauberk of banded mail. He is winding up one of the "*springaldes*," which seemed to have been a large alabaster or cross-bow, worked as usual with a windlass. Three other defenders are on towers or turrets of less altitude than that occupied by De Harcla and the "*springalde*" man. One is lifting

a stone of great weight; a second, with a coolness and imperturbability that made him think him the town clerk, thrusts a long spear through a Scot who has climbed up a ladder; while a third with his left hand clutches the Scot by the throat, and with his right, in which is an enormous falchion, endeavours to decapitate him. All these three are alike clad in hauberks of banded mail and surcoats, but their head-gear is varied; the third wears a plain steel or iron skull-cap; the second a coif of mail; while the first wears some sort of hood. The besiegers are represented by six individuals: one of them, "*the forlorn hope*," they might suppose, had already been mentioned as on the top of the ladder. He has met with a warm reception, is falling, and apparently about to give up the ghost, but still brandishes in his right hand a huge battle-axe; his left arm hangs relaxed, but the shield has not yet fallen to the ground, but is suspended from the arm by the enarmes at the back of the shield. Three more of the besiegers are at the foot of the walls; one is an archer, and is discharging an arrow at the men on the battlements; another, with a spear in his hand, watches the man falling from the ladder; while a third, in the act of vigorously plying his pick, is felled to the ground by a stone which takes him about the nape of the neck. Two besiegers and the "*machina ad lapides jaciendos*" form a separate group. The machine is a *trébuchet*; one of the men has laid aside his battle-axe, and with a mallet is wedging a stone into the loop of the sling. The other man is transfixd by a spear hurled by De Harcla, and falls off the frame of the machine on which he has been standing. He has an arrow in his right hand and a bow in his left. The besiegers are all dressed alike, in most wretched habiliments; they wear cloaks with hoods, some sort of clothes covering the loins, and apparently nothing else, save that their feet are encased in brogues. The whole drawing is full of life, truth, and vigour, and its fidelity to the account of the siege given in the Chronicle of Lanercost is most remarkable.

### INGESTRE HALL.

ON the 12th inst. Ingestre Hall, Staffordshire, one of the mansions of the Shrewsbury family, was destroyed by fire, which is supposed to have originated in an old beam under the hearth of the state-room having become ignited from the continuous fire. The hall was erected in 1676, and in it were stored many heirlooms, valuable ancient portraits, and the majority of the old Talbot family paintings. Among the burning *débris* in the state-room and grand dining-hill, all the contents of which were consumed, were the paintings of the old Talbot family, a valuable portrait of George IV., and a much-prized life-sized painting of the Earl's great-grandfather, once a popular Lord-Lieutenant of Ireland, known as "*old Lord Talbot*." Some ancestral tokens of family connections with royalty have also perished.

Mr. Loftus Brock, in a letter to the *Times*, says the destruction of the Hall is not an isolated instance of the great danger to which ancient buildings are exposed from the vast amount of wood used in their construction, as vast numbers of old mansions have been burnt to the ground one after another, in a more or less unexplained way. Of these, the environs of London alone testify to the loss of many a priceless work of ancient art.

Mr. Brock describes one case in his own practice as follows:—Several years ago a fortunate alarm of fire in a grand old Jacobean house in one of the midland counties led to a searching examination. I accomplished this by having the hearthstones taken up throughout the house, or nearly so, and some of the elaborate chimneypieces as well. In something like one half of these cases huge oak beams, so common in the construction of ancient floorings, were found beneath the hearths, which in some positions were so close that they rested upon the oak, there being in none either intervening trimmer-arch or concrete. It was therefore not to be wondered at that the ends of these beams were found either charred or so dry as to cause matter of surprise that fire had not actually taken place. This process of preparation for burning had evidently been going on slowly for years. At all hazards I had the ends of the beams either cut away entirely, or the thickness so greatly reduced as to admit of an air space around and over them, and a heat-proof foundation provided for the hearthstones before they were relaid. The bearings of the beams thus weakened were made good by wrought-iron plates inserted beneath them, or by other corbels, rendered necessary by the presence of some elaborate cornices in the rooms below, which could hardly be disturbed. The result of these very simple and comparatively cheap precautions, thus applied in time, is to save the building from fear of destruction, and what was accomplished in it can be applied with equal facility to any other. Another vulnerable point of our old buildings is the course of the flues. It is not unfrequently the case that several of the chimneys are added works, carried up close to or even beside the older beams of construction. The course, therefore, of the flues should be carefully traced. Oak is a material that does not burn easily, and is not to be lighted by any mere spark. The recurrence of such losses as these may therefore be fairly classed under the description, if not of preventible disasters, at least of those which can be very materially reduced in number.



## THE LONDON SCHOOL BOARD.

AT the first meeting of the London School Board after the holidays the Chairman, Mr. E. N. Buxton, reviewed the work of the Board. In the course of his address he said:—The Act of 1870 requires that schools should be provided for all the children for whose elementary education efficient and suitable provision is not otherwise made. We cannot be said to have yet reached this state of things. While the number of schools that have been built, together with those we found in existence, would more than suffice for the children of London as it was in 1870, London in 1882 has increased to such an extent that we still find ourselves in arrear. But though the stern chase which is imposed upon us is proverbially a long one, we have distinctly diminished the distance between the schools that exist and those that are needed. Thus, while the school population has increased since 1871 from 574,693 to 733,060, the accommodation in efficient schools has grown from 262,259, or 45·6 per cent. of the children of school age at that time, to 531,427, or 72·4 per cent. of the children now in existence. During the past three years the school population has increased by 34,720, and we have provided during that period new schools for 70,589. During the twelve years we have provided in 260 schools accommodation for 256,360 children, while the accommodation in voluntary schools, which in 1871 was for 262,259, is now for 261,868. If we now strike a balance of the net results, we find that the number of school places required, after making all necessary deductions for reasonable causes of absence, amounts to 641,428; while the total number of school places in efficient elementary schools will amount at the end of our term of office to 539,044 only. One practical proof of this deficiency is found in the number of children who are still refused admission in the growing districts. If these figures are not sufficient to convince persons who contend that we have overbuilt, we can appeal to the official statement in the House of Commons by successive Vice-Presidents of the Council, who, while giving us credit for a vigorous attempt to overtake the deficiency, have from time to time reminded us that we cannot yet claim to have accomplished this our primary and most necessary task. Owing to street improvements and new railways, to the establishment of large warehouses, and, perhaps, to an ever-increasing tendency to live away from their work, there is a constant migration of the artisan classes from the central districts of London to the outer zone. This, added to the absolute increase of population, has caused in some divisions a growth which may be almost described as appalling, and it raises the question whether we might not, in the interests of economy, look further ahead than we have hitherto done in the purchase of sites, so as to secure them where they will inevitably be wanted before the pressure of population has caused a rise to extreme prices. Thus, I find that the average price per square yard of the whole of the sites purchased by us has been 2*l.* 6*s.* 3*d.*; that of the sites within the one mile radius, 10*l.* 16*s.* 9*d.*; while that of the sites purchased in new districts has been under 1*l.* Neither should we leave out of account the importance, in building our schools, of antedating the arrival of the population; otherwise, while the walls are building, the children look on from the streets. It is, moreover, very shortsighted policy to build our schools in the growing districts only for the existing children. Enlargements are constantly necessary to schools the accommodation in which has been cut down to the bare needs of the present, and experience has repeatedly shown that this involves a far heavier charge than if the school had been built of the full size in the first instance. With reference to this, one of our superintendents writes:—"Unless we are to be in a chronic state of want of school places, steps must be taken three years in advance in neighbourhoods where the population is rapidly increasing." And again—"Pending the enlargement of Buckingham Terrace Schools, a number of boys are 'about the street' growing up in ignorance themselves, and becoming a fruitful source of truancy to others." Although we cannot, in view of these facts, take credit for having completed our school provision, an enormous amount of good work has been accomplished, and the results are beginning to be apparent. As the deficiency of accommodation is provided for, the desire for education extends. This is well shown by the fact that whereas in 1871, when the school places numbered 262,259, or half what they now are, there were only 222,518 on the rolls, now that the total accommodation, including voluntary schools, has been increased to 531,427, the number on the rolls is 525,999. In other words, though the supply has doubled, the demand has more than overtaken it. Writing of this part of our work, Mr. Bailey, one of her Majesty's Inspectors, and therefore an independent authority, in his report to the Education Department remarks:—"I must now conclude, but can hardly do so without testifying to the immeasurable benefit which the School Board has conferred on the East of London. Clergymen have told me that they hardly know their own parishes, so great has been the change for the better." The statistics which we collect for our bylaws purpose show that the voluntary schools have fairly maintained their position during the last few years. Notwithstanding the fact that since 1870 accommodation for 256,360 children has been provided in Board schools, the attendance in voluntary schools has not diminished, a

higher standard of efficiency is maintained than was previously thought necessary, and a diminishing number apply to be taken over by the Board. Thus while in 1877, 10 schools accommodating 3,655 children, and in 1878, 14 schools, accommodating 7,028 children, were transferred to us, during the past three years only eight schools, accommodating 3,682 children, have been transferred. Since 1870, 133 schools in all, with accommodation for 44,678 children, have been transferred to us; yet the number of children in average attendance in voluntary schools is somewhat larger now than it was at that time. A few of the weaker schools have always, and will always, from time to time, cease to exist, quite irrespective of any action on the part of the School Board. Thus I find that of those schools which have received a building grant—the only schools of which I am able to get a return—exactly the same number were closed on an average of years previous to 1871 as since that year. While some improvements in detail have been introduced into the construction of our schools, there has not been much departure from the general design which was determined upon some years ago; but in a few cases a large central hall has been introduced, or, where space was a secondary object, schools have been built entirely on the ground-floor. The cost of our permanent Architect's Department, which has been sometimes criticised, is really far less than if we adopted an open system of competition. It amounts to less than 3·5 per cent. on the cost of the schools, and has the further advantage that experience of all suggestions of proved value is accumulated and applied in future designs.

## ARCHITECTS AND ENGINEERS IN INDIA.

SIR GEORGE BIRDWOOD has called public attention to the proposed deformation of Muir College, Allahabad. The college is, he says, one of the finest modern public buildings in India. So much of it as has been completed forms two sides of a quadrangle, built in an intelligent and cultivated rendering of Mahomedan architecture, with tile-covered domes, one 120 feet high, and a bell tower rising to 190 feet. The hall and library are magnificently proportioned rooms, elaborately decorated; and altogether the building, in the opinion of those who have seen it, or the designs for it, which were exhibited some years ago in the Royal Academy, is one of the most successful efforts of its architect, Mr. William Emerson, who is well known in India by the Crawford Markets and sundry churches built by him in Bombay, and the fine hospital at Bhaunagar.

Some time ago it was proposed to add an observatory and a new classroom to the college, and that these additions to it should, in order to save the architect's fees, be made by the Public Works Department, and not by Mr. Emerson. The architect, and others interested in the college, strongly objected to this; and their objections have been successful to the extent that it has now been resolved that the new buildings shall not be added to the college, in completion of Mr. Emerson's quadrangle, but be placed as a separate block, at some distance from it, on its least public side, and as much as possible out of view from it.

Unfortunately, the college authorities still adhere to their first proposal for employing the Public Works Department on the new buildings, and not Mr. Emerson. The very fact that they have determined that the additions to the college shall not be connected with it, but be hid away out of sight of it, so far as is possible, is a sufficient proof that they recognise the grave and wilful offence against art in what they contemplate doing, while pleading in justification the typical English economy which would spoil a coat for the sake of skimping a little cloth.

The Government of India has of late years recognised the duty of conserving the architectural remains of the bygone religions and ruling dynasties of India; and surely their reverent care should be extended also to the protection of beautiful modern buildings in India from wanton deformation. The Government of India is also now taking a direct interest in cherishing the artistic instincts of the people of India, and this is to be done not only by bringing together costly collections of art objects, which, after all, are seen by comparatively few, but still more by giving the things which must be seen by everybody, such as public buildings, the highest possible expression of beauty. The true economy, indeed, in making the necessary additions to Muir College would be for the college authorities to recognise at once that architecture is the work of architects, and that nothing but failure, discredit, and the worst waste in the end, can result from the misjudged proposal to complete an architectural work of such magnitude and artistic importance, without reference to the original designs, or under the direction of men who, although excellent engineers, are emphatically not architects.

Mr. R. Aitken, C.E., follows up this letter by some personal experiences. In England, he says, a man may be a civil engineer or a military one; he may be an architect or he may be a mining or a mechanical engineer; but no sooner does he land in India than he is supposed to be able to undertake works which necessitate experience in all the foregoing professions. What wonder, then, that India is studded with ghastly buildings, tumble-down barracks, and engineering failures of every kind and description?



His own experience in India was a series of struggles against ignorance and prejudice of the most provoking and obstinate kind. When Mr. Aitken pointed out that docks were required for the steam sea-going trade of Bombay, he was told by the Department that he knew nothing about it, although he had been in the offices of two of the most eminent harbour engineers in England. They delayed the construction of these docks for years, and if they could have had their own way, they would not even now have been built. If there had been no docks in Bombay harbour the Indian contingent would not have arrived at Suez in time to take part in the Egyptian war. The Public Works Department determined to stop the works at Kurrachee harbour, saying it was useless to attempt any improvement. It was useless for civil engineers to point out that they were mistaken. The works were stopped, and, as a captain of a steamer said, "an old General of Engineers was trying to cure Kurrachee bar by throwing bottles into the Indus." Many other instances could be given where great injury has been done to the country by the Public Works Department being the master of the public and not its servant.

### LILLESHELL ABBEY.

A PARTY of members of the North Staffordshire Archaeological Society lately visited Lilleshall Abbey, when an address was delivered by Mr. Charles Lynam, architect. The present remains, he said, indicate that the abbey consisted of a cruciform church, running east and west, with a cloister garth to the south, on the east side of which were the chapter-house and dormitory. On the south side were the day-room and refectory. On the west side very little more than the lines of foundations of former buildings now remain. There are also some remnants of the boundary walls enclosing the abbey grounds. Up to the date of the foundation of the abbey (A.D. 1145) the semicircular arch had been almost exclusively used in all arcuated buildings, and it is also the prevailing form in these buildings, but it is here used with a richness and refinement that almost shrouds its simple form and transports it, as it were, into the much-yearned-after Pointed form. Indeed, before the completion of the buildings this new form is adopted in all its beauty and strength. Thus in these buildings the precise transition between the old and the new world of architecture is most perfectly exhibited. It is remarkable that the whole of the buildings seem to have been carried on and completed within a few years, probably within the rule of the first abbot (1148 to 1174), and that very slight alteration was ever made in them, so that they present as perfect an example of the transition from the semicircular to the pointed arch—that is, from the Romanesque to the Gothic style—as can be seen anywhere. At the time of their commencement the round arch alone was used, but before their completion the pointed arch was fully adopted. The church consisted of a nave, north and south transepts, chancel, with a chapel on each side of it, and a chapel west of the north transept. It was entirely without aisles. There was also a second chapel to the east of each of the transepts. The church was divided by a screen wall at about one-third of its length from the west end. The eastern portion formed the church of the monastery, and the western that for public use. At a later date another screen wall was erected eastward of the first division, and formed a central chapel. The remains of three steps at the eastern end of the western division seem to indicate that there was a high altar there for the use of the public church, and that in the chapel east of it were two altars; the remains of the one on the south side still exist, and also the piscina. In the portion of the church used by the monks there appear to have been no less than eight altars. That part of the church used by the monastery was entered by the processional doorway from the east walk of the cloister and by a doorway in the gable of the south transept, and the central chapel, with two altars, was entered by a doorway in its eastern wall. The western part of the church was entered by the great western doorway. It had also a doorway to the north and a priests' doorway to the south from the west walk of the cloister. On its north side is also a doorway to a stair turret which led to the roofs. There are still remains of altars in the chapel against the south side of the chancel, in that of the south transept, and in the central chapel. In the first-named the piscina and aumbry also remain, and in the latter the piscina. The proportions of the church are very remarkable, its length being more than seven times its width; but its height was in good relative proportion. It was spanned by a semicircular barrel vault strengthened by diagonal and cross ribs. Its walls were no less than 6 feet in thickness, and may be said to have been without buttresses; yet the abutting walls were skillfully arranged so as to assist the strength of the main walls. Excepting the large traceried window of the east gable of the chancel, no alteration was made in the original work of this church; and its exterior, with its noble western doorway, its great height of wall, pierced by large yet simple round-arched windows; its interior, with a length of more than 220 feet and proportionate height, covered with simple vaulting, must both alike have been truly majestic. The buildings to the east of the cloister square consist of the chapter-house, a passage on the north side of it leading to the abbey grounds to the east, and another passage against the gable

of the south transept which led to the church and the monks' dormitory, which was over these two passages, and the stairs to which still remain. The vaults of these two passages are the only ones now existing, and afford a clear indication of the vaulting which covered the church and the other buildings. The lavatory and aumbry adjoining it are on this side of the cloister. In the chapter-house is a coffin lid with a cross upon it, indicating no doubt the burial place of one of the abbots, as this was the usual place for their interment. The buildings on the south side of the cloister square consist of a passage at the east end which led to the gardens on the south, a small portion of the walls of the day-room, the refectory, and kitchen, which had a cellar beneath it. The refectory was entered from the south walk of the cloister, opposite to which is the recess used as a pulpit. It was lighted by windows in the south wall. The kitchen appears to have been at the west end of the refectory, with its fireplace against the wall of the refectory, and a doorway between the two. The buildings to the west of the cloisters were probably the guest-house and abbot's house, but their foundations now alone remain. The kitchen communicates with these buildings. There is clear evidence that all the buildings were vaulted except the cloister walk, which seems to have had a lean-to roof of timber. The walls to the buildings other than the church were 4 feet in thickness, and these, as well as those to the church, were built of coursed rubble work with ashlar quoins at the angles, and for the dressings. The principal dimensions of the buildings are as follows:—Length of the church, 223 feet; width, 30 feet 6 inches. Transepts, including the crossing of the nave, 100 feet by 32 feet 6 inches. The chapter-house is 23 feet 6 inches wide. The day-room has a length of 33 feet, and the refectory is 43 feet 6 inches long by 24 feet 6 inches wide. The cloister square from east to west measures 129 feet, and from north to south 107 feet. In the refectory two monumental effigies are placed in recesses in the north and south walls. No one can visit this abbey and not be impressed with the skill shown in the arrangement of its plan, with the deep scientific knowledge exhibited in its construction, and with the exquisite beauty of its design, all of which, however, may have emanated from a French rather than an English origin. Not the least remarkable feature about the work is that its stone should have lasted so long with scarcely a trace of decay in many parts. Numbers of the ancient masons' marks are now as visible as when first made on the outer faces of the stone. It ought to be an interesting question for the geologists to determine from what quarry this stone was procured.

### THE GLASGOW INSTITUTE OF ARCHITECTS.

THE annual general meeting of the Glasgow Institute was held on Tuesday, Mr. John Honeyman, F.R.I.B.A., the president, in the chair. Among the members present were Messrs. James Sellars, jun., vice-president; Wm. Landless, honorary treasurer; Wm. MacLean, writer, secretary; John Baird, H. K. Bromhead, Campbell Douglas, Thomas Halket, jun., William Leiper, J. A. Morris (Ayr), Alexander Petrie, A. G. Thomson, David Thomson, James Thomson, Robert Turnbull, and T. L. Watson. The annual report, which was read by Mr. MacLean, stated that the total number of members now upon the roll is 49; and while some further accession is desirable, the council consider it to be a fair subject for congratulation that, considering the necessary qualifications, so large a proportion of the profession in Scotland has joined the Institute. The first subject which occupied the attention of the council during the year was the revision of the regulations for the measurement of mason-work. As a result of numerous committee meetings and meetings of council, the rules as revised were printed and circulated among the members. They were then considered at two meetings of the Institute, and, with various consequent modifications, again printed. The Glasgow Institute of Measurers was then invited to confer with the council on the subject, but the Measurers' Institute being otherwise engaged, this conference did not take place, and the revised rules were sent to the Master Masons' Association, from whom the proposal to amend the existing rules originally came. The council has received no further communication from them or from the measurers on the subject. They think it desirable that before any decision is come to, the matter should be brought under the notice of the Edinburgh Architectural Association and the Edinburgh Measurers, with the view of introducing one uniform system of measuring mason-work in all parts of Scotland. The New Municipal Buildings Competition again occupied the attention of the council. Since last report the architect for the proposed building has been appointed by the Town Council, which has in this and all other respects honourably adhered to the conditions of the competition and implicitly followed the advice of the professional assessors. It is, however, to be regretted that the Town Council did not take a broader and more liberal view of its duty in the matter of exhibiting the successful and the unsuccessful designs after the final award had been made. The letter of the conditions was barely fulfilled by the exhibition of the ten designs submitted in the final stage for six days only in most unsuitable



rooms, and the representations of the council of the Institute as to the general desire of competitors and others that as many of the designs as could be obtained should be publicly exhibited were entirely unavailing. The Town Council unanimously refused to have anything to do with such an exhibition. In these circumstances, and having ascertained that it was generally desired by the competitors and by many members of the profession, the Institute decided to undertake the management and pecuniary responsibilities of the exhibition. The exhibition was accordingly held in the upper rooms of the Corporation Galleries (the use of which was kindly granted by the Town Council for the occasion), and was open to the public free of charge from September 2 to September 14. It proved both interesting and instructive, and was visited by over 4,000 persons. Fifty-six designs were exhibited, and these were illustrated by about 400 drawings. A sum of 100*l.* was voted by the Institute to meet the expenses of the exhibition, and it is gratifying to know that the expenses did not exceed one half of this sum. The committee charged with the arrangements connected with this exhibition so satisfactorily carried out were—Messrs. John Honeyman, the president; James Sellars, the vice-president; John Baird, William Landless, and T. L. Watson; Mr. Sellars, convener. The council recently made application for a copy of the new Police Bill, which, however, they have not yet received. The council are of opinion that such a measure, in so far as it deals with matters affecting heritable property and hygiene, deserves the most careful consideration of all members of the Institute, and they would strongly deprecate any undue haste on the part of the authorities in legislating on such subjects by pushing forward the new Bill before all classes of the community have had ample leisure to consider how they are to be affected by it. The abstract of accounts of Mr. William Landless, honorary treasurer, shows the funds of the Institute to be in a very satisfactory state.

The President, in moving the adoption of the report, said the minutes of the past session, and of every preceding session, would show that they had devoted very little time indeed to matters immediately bearing on their own advantages. The greater part of their time had been spent in dealing with such subjects as modes of contracting and methods of measuring, building regulations, sanitary matters, and others, all of much more importance to their employers than to themselves. He thought this was exactly as it should be. Their first duty as a society was exactly the same as their first duty as individuals, and that was certainly not to look after number one. There were abuses to eradicate and reforms to accomplish, in dealing with which individual efforts would be quite unavailing, but where union would prove to be strength; and, unfortunately, he must also add that there were new dangers to be apprehended and mischievous innovations to be resisted. It would, he thought, be entirely wrong for their Institute to allow such a measure as the new Police Bill, for example, to pass without careful consideration and criticism. Their fellow-citizens, indeed, had a right to expect their advice in such a matter. The doubt at present seemed to be whether or not they and their fellow-citizens were to have any chance of considering that Bill at all. He hoped that doubt would soon be satisfactorily resolved, and their representatives would refuse to allow any further step to be taken till they had at least thoroughly mastered every detail, and weighed its consequences. He believed that in that case they would be able to consider the clauses relating to land and building regulations at their leisure. But there was another matter in which they were deeply interested both as citizens and advisers—he referred to the proposal of the Gas Committee to debar all and sundry from supplying electricity, in order that they might secure a monopoly of that production themselves. Many of them must know that they were already reaping the fruits of this short-sighted reactionary policy, and that there was more difficulty in getting work of the kind done in Glasgow than in any large city in the kingdom; but then while five firms wish to commence work the Town Clerk has been instructed to inform them that the committee “cannot consent to any licenses or Provisional Orders being granted to any parties empowering them to provide or supply electric light within the city.” He could not say more on the subject then, but he would express his own personal conviction, that if the citizens allowed the Corporation to act on the recommendation of the Gas Committee, they would ere long heartily repent of it. It seemed to him a monstrous thing that at this time of the day they should, without a word of protest, allow themselves quietly to be fixed down under the incubus of a monopoly which must inevitably paralyse local enterprise and drive an important industry from the city.

Mr. John Baird, in seconding the adoption of the report, said that he thought one of the best things the Institute had ever done was getting up the exhibition of designs for the Municipal Buildings, which had excited a great deal of interest among the citizens, and given them some idea of what had been done by competitors. He also thought that the Institute showed gratifying signs of vitality and progress, and especially during the presidency of Mr. Honeyman, and hoped the members would continue to give their best attention to the interests of their employers and of their fellow-citizens.

The Council of Management for the year was, on the motion

of Mr. Campbell Douglas, seconded by Mr. Petrie, chosen; consisting of Messrs. John Honeyman, James Sellars, jun., William Landless, Hugh Barclay, John Gordon, John Murdoch (Ayr), Robert Turnbull, T. L. Watson, David Thomson, James Thomson, and William Leiper.

On the motion of Mr. James Sellars, jun., a hearty vote of thanks was given to Mr. John Honeyman, the retiring president.

A meeting of the newly-elected Council took place immediately after the general meeting of the Institute. Mr. James Thomson was elected president; Mr. David Thomson, vice-president; Mr. John Burnet, auditor; Mr. William Landless, treasurer; Mr. William MacLean, secretary.

## CHURCH BUILDING AND RESTORATION.

**Exeter.**—The completed portion of the new church of St. Matthew was opened on Thursday last week. It comprises the nave, aisles, transepts, and the base of the tower. The style is Early First Pointed, which, while less costly than others, admits of simple yet dignified treatment. Externally the building is of local red brick, relieved by string-courses and bands of Box-ground Bath stone and deep red moulded brick, while the dressings of the windows are of Bath stone. Outwardly the chief ornamentation is on the west front, which faces the roadway. There are double western doors, composed of oak. Above them is a traceried tympanum, glazed with coloured glass, and small windows on each side of the doors to light the entrance lobby under the gallery. The arch of the dome over the doors is composed of Bath, Pocombe, and lias stone; while in the head of the gable over the door is a Bath stone niche, in which at some future date it is intended to place a figure of the patron saint of the new parish. In the tower above the doors are two two-light windows with traceried heads, flanking the niche before mentioned. Above and between the heads of these windows is a sex-foil circular window with coloured glass, and above the whole rises a deeply moulded arch. At present the tower is only carried up to about the level of the nave roof, and to complete it 1,000*l.* more will be required. Interiorly the shafts of the columns in the nave are of grey granite, with handsomely carved bases and caps of Hamhill stone. From these pillars spring graceful Pointed arches. The voussiors of the arches are alternately of Pocombe and Corsehill (Dumfries) stone, the former a variegated kind, and the latter of a rich reddish-brown. The responds against the walls of the tower and transept are of Pocombe stone. The spandrels in the nave are at present faced with buff brick from Chudleigh. The chancel is backed with a temporary alcove, until the chancel, the foundation of which has already been laid, is completed. Above the arches in the nave light is admitted by means of small Pointed windows, fitted with cathedral glass, with coloured heads. The transept arches are of Hamhill stone, with Hampshire brick moulding, and a Hamhill label outside. The roofs of the nave and transepts are barrel ones of pitch-pine, and the same material is used for the lean-to roofs of the side aisles, around the walls of which a dado of coloured tiles is to be fixed. The clerestory windows, six on each side, are two-light ones, with small quatrefoil and trefoil lights above. In the western tower, immediately over the entrance lobby, is a gallery approached by a newell staircase. The front screen of gallery is of carved Hamhill stone, supported by Corsehill stone columns on Hamhill bases. On the west side of the tower is the baptistry. The bowl of font is of Caen stone and the die of Corsehill, surrounded by six columns of Devonshire marble. The altar is of oak, carved. The builder, Mr. Luscombe, has had all the carving executed by his own workmen. A small quatrefoil window in the baptistry, filled with coloured glass, is the gift of the architect, who also presents a handsome brass altar-cross. The whole of the glazing has been done by Mr. F. Drake, of the Cathedral Yard; while the lighting and warming have been entrusted to Mr. F. M. Rice. The wrought-iron hinges of the doors have also been executed by Mr. Rice. Mr. R. Medley Fulford, of Exeter, is the architect.

**Taunton.**—The work of beautifying and restoring the church of Holy Trinity, Taunton, has been completed, and the edifice reopened. The choir and sanctuary have been raised from the level of the nave, the former by two and the latter by four steps, thus displaying to greater advantage the reredos and altar. The old choir has been removed and new open pitch-pine stalls have been substituted, while the whole of the floor of the chancel and choir, together with the nave and aisles, has been laid with Minton encaustic tiles. A new pulpit of Beer stone and a handsome altar screen have been added. The church has been re-seated, pitch-pine open stalls with ornamental ends taking the place of the unsightly high-backed pews. A new font of Beer stone, of a chaste design, has been given by the members of the Band of Hope connected with the church. The chief amount of attention has been bestowed upon the chancel, the walls of which have been painted and decorated in chaste stencil patterns in various colours; also the pillars and panels of the gallery. Two cathedral glass windows have been inserted in the chancel. The plant and drawings have been prepared by Mr. G. C. Strawbridge, architect, of



Taunton, under whose direction and superintendence the works have been carried out. Mr. H. J. Spiller was the builder, and Mr. T. J. Serle has carried out the decorations.

**Glasgow.**—The Mure memorial church at Baillieston has been opened; the buildings comprising hall, session-house, vestry, classroom, &c. The church is seated for about 430 persons. There is a large vestibule at the entrance door communicating with the area and the stair to the gallery. The interior of the church, which is spanned by semicircular bound couples supported on stone corbels, is divided by two passages into three divisions of seats. The style of the building is the thirteenth-century Gothic. Messrs. J. M'Kissack and W. G. Rowan, of Glasgow, were the architects.

**Edinburgh.**—The foundation-stone of a new church at Loanhead has been laid. The estimated cost of the building, the style of which will be thirteenth-century Gothic, with hall, is estimated at 2,200/. Accommodation will be provided for 600 persons. Mr. Hardy is the architect.

**Glasgow.**—A new church is about to be erected in Crown Street, Gorbals, from the designs of Mr. James Ritchie. The style of architecture is Anglo-Romanesque. The church will be roofed under one span, but internally supported by columns and semicircular arches over the side galleries, thus forming nave and aisles. The ceiling will be plastered up to the under side of the ridge, the timber work of the couples being exposed. The window openings are all round-headed or circular, with tracery in the church and front of the offices. Over the deeply-splayed and pedimented doorway will be a triple-arched recess, in the lower part of which is a series of six lights for the back part of the area, and in the upper part three single lights for lighting the end or centre gallery. At the street corner the tower rises plain over one of the exit doorways, up to the belfry stage, which is at a level over the roofs of the adjoining four-storey tenements. This stage will be pedimented on the four sides, and pierced with openings having mullions and traceried tops. The steeple will be completed by an elongated dome or spire with four sides, capped with a crown-shaped iron terminal about 110 feet above the ground.

**Evans Memorial Chapel.**—A chapel has been recently erected from the designs and under the superintendence of Messrs. Charles J. & C. Herbert Shoppee, on a site forming part of the exercising grounds of the Home and Colonial Training College, Gray's Inn Road. It is approached from an arched covered way, serving as a cloister, and is intended as a memorial to the late Rev. J. J. Evans, M.A., for many years Principal of the College. The style is Romanesque, and the dimensions of the chapel are 53 feet in length, by 22 feet in width, with an aisle on the north side, 27 feet by 9 feet. Externally the chapel is partly faced with glazed white bricks and Box stone dressings, relieved with blue bricks in courses, and covered with green slates and red ridge tiles. On the stone tympanum over the entrance doors the words "Holiness unto the Lord" are incised, and the letters gilt. The interior of the chapel is faced with white Suffolk bricks and string-courses and cornice of dark purple Luton bricks, with Box stone quoins, jambs, and arches to the windows. The windows are glazed with tinted glass in geometrical patterns, in lead lights by Messrs. Odell. The arcade separating the aisle from the chapel is semicircular, and has moulded stone voussoirs and labels. The shafts are of polished red Aberdeen granite, with moulded stone bases and stone capitals, carved by Mr. Bradford, of Albert Street, Kennington Road. The roofs are of pitch pine, with moulded principals resting on Box stone corbels, and with moulded ribs and cornices. A pitch pine dado, 5 feet high, is fixed to the walls. At the west end is a gallery with ornamental pitch pine front, and with a separate access by stone staircase from the cloister. The reading-desk, entrance doors, lobby, and seats are of pitch pine. The chapel is paved with Craven, Dunnill & Co.'s geometrical tiles, with encaustic tiles at intervals. The gas-fittings are of wrought iron, of Messrs. Gardner's manufacture. The chapel will be heated by hot water. A brass memorial plate, engraved by Mr. Gawthorp, is fixed against the south wall. Ample provision has been made for ventilation and the admission of fresh air. The works have been well carried out by Mr. Henry Burman, builder.

### GENERAL.

**Mr. G. G. Hoskins, F.R.I.B.A.,** has completed additions and alterations at Oakwood Croft, near Darlington, the residence of Mr. C. G. Johnson, J.P.

**Mr. M. Carr,** architect, of Queen's Square, Middlesborough, has prepared plans for a new Roman Catholic cemetery and chapel at North Ormesby, which have now been formally approved by Dr. Lacey, Bishop of Middlesborough.

**Mr. J. V. Edwards,** assistant surveyor, has been appointed West Riding surveyor in place of Mr. B. Hartley, resigned.

**The Decoration Committee** of the Lerwick Town Hall have received an intimation from Mr. G. H. B. Hay, of Hayfield, of his intention to present a stained-glass window in commemoration of his late father, the subject to be illustrated being the reign of James III. of Scotland.

**The St. Gothard Tunnel** has been selected as the subject of the prize poem for the Chancellor's gold medal at Oxford for 1883.

**The Rev. Canon Pearson** has presented four enamel mosaics to Canterbury Cathedral, which have been placed in the open spaces of the altar. The subjects are four angels, taken from the celebrated paintings of Fra Angelico, the originals of which are now treasured at Venice. The background of each is of rich gold, on which the delicately and artistically traced figures present a striking picture when seen in a favourable light. The work has been carried out by the Venice and Murano Glass and Mosaic Company.

**National Portrait Gallery.**—A complete re-arrangement of the pictures and sculpture in the National Portrait Gallery has been resolved on, and will be commenced forthwith. The portraits formerly in the British Museum and Hall of Serjeants' Inn will no longer be kept apart, but incorporated chronologically in the general series. Every picture will have, according to rule, a distinct statement on the frame of the donor's name. It is not intended to close the whole of the gallery during the alterations, but one portion or another will always be open to the public.

**Mr. James Matcham,** builder, of Plymouth, was killed on the 12th inst., through a fall from a scaffold at the Naval Barracks, Keyham. Some of the largest works in the West of England have been carried out by him, including the Devonport Public Hall, the Rougemont Hotel, Exeter, Mr. Singer's mansion at Paignton, the Imperial Hotel and St. John's Church, Torquay, and the Militia Barracks, Mutley.

**The Matlock Grounds Competition.**—Fourteen designs were submitted in open competition for laying out the grounds of the Matlock Bath, Pavilion, and Gardens Co. (Limited). The first premium of 25/ was awarded to Messrs. Barron & Son, Borrowash, Derby; the second premium of 15/ to Messrs. Brockbank, Wilson & Mulliner, Albert Square, Manchester; and a supplementary premium of 5/ to Mr. F. S. Smith, 14 St. Anne's Square, Manchester.

**The Vestry of St. George's, Hanover Square,** have, it is said, acquired a site opposite the Royal Mews entrance to Buckingham Palace for the purpose of erecting a workhouse and casual ward.

**Mr. Tomlinson,** Engineer to the Canadian Government, is at present in England superintending the construction of an iron bridge for the Canadian Pacific Railway Company by Messrs. Hawks, Crawshay & Sons, Gateshead. The bridge is intended to cross the Frazer River, the Rocky Mountains, British Columbia. The total length of the bridge will be 525 feet, with a clear span of 315 feet.

**The Plymouth Pier Company** have, it is stated, disposed of the rights of the Plymouth Pier by private contract, and the work will now be proceeded by Mr. Daniell, who has been engaged in carrying out some important contracts at Portishead.

**Benwell Tower,** the residence of the Bishop of Newcastle-on-Tyne, is undergoing internal renovation, under the supervision of Mr. Robert Johnson, architect, New Bridge Street, Newcastle. The principal contractors for the work are Messrs. J. & W. Lowry, of Corporation Street.

**An English Church** is to be erected at San Remo from the designs of Mr. Norman Shaw, R.A. The cost will be about 3,800/. inclusive of site.

**Mrs. Normand** has offered to build a public hall for Dysart, Fifeshire, as a memorial of her late husband, for many years provost of the burgh.

**The Parks Committee** of the Manchester City Council recommend the taking down of the old museum building and replacing it by a new structure in Queen's Park from the designs of Mr. Allison, the city surveyor.

**The Vicar of Ashford Parish Church** has decided on the erection of suitable Sunday-school buildings on a site adjoining the church.

**The French Academy of Inscriptions and Belles Lettres** invite competitions for the prize of 2,000 francs, which they will award in 1884 to the author or authors of the best essay upon the history of art prior to the era of Pericles. The founder of the prize is M. Louis Fould. The competition will be open to all savants, foreign and French alike, with the exception of the members of the Institute of France.

**The Worcester Art Exhibition** closed on Wednesday. The receipts up to Tuesday night had been 9,794/ 16s., besides 250/ for items not yet ascertained. The expenditure was 8,500/, so that a balance of over 1,500/ is at the disposal of the Committee for the Promotion of Art and Industrial Purposes in Worcester and Worcestershire.

**Manchester Royal Institution.**—The voting for representatives to serve on the Art Gallery Committee of the Corporation took place on Wednesday as follows:—Mr. W. A. Turner, 38; Mr. C. J. Pooley, 37; Mr. T. Ashton, 34; Mr. T. R. Wilkinson, 30; Mr. R. Smith, 29; Mr. C. J. Galloway, 27; Mr. C. P. Scott, 26 (the above seven were elected); Mr. G. Milner, 22; Mr. T. Worthington, 19; Mr. E. Salomons, 19; Mr. T. C. Horsfall, 19; Mr. S. Barlow, 17; Mr. G. Falkner, 17, and Mr. H. M. Ormerod, 16.

**Mr. A. B. Brady, C.E.,** has been elected surveyor to the sanitary authority of the Maldon Union, Essex. There were sixty candidates.



# The Architect.

## ART IN NATURE, AND NATURE IN ART.



SOME critics of Art who are at a loss to explain themselves have a felicitous way of taking refuge in the obscurity of a well-known mystical proposition which is expressed in the phrase that we ought to go to Nature. What it is to go to Nature is always left open; indeed, if this were a little more clearly explained the doctrine would lose its force for want of vagueness. But there is one way of putting the question, if only in connection with constructive art and decoration, wherein a man may venture to hope that intelligible argument is within his reach, if he will insist upon the adoption of plain language. That is to say, when it is urged upon us, as it often is, that Nature avoids regularity, and therefore that Art ought to do the same, here we have something definite which can be argued out. If to go to Nature is *inter alia* to avoid the ordinary symmetries of Art, and in a manner to deny that two and two make four, this at least can be disputed with every hope of success.

An eminent amateur, speaking two or three weeks ago to the students of a provincial School of Science and Art,\* set forth the well-worn doctrine thus:—That there is no unquestionable standard of beauty except Nature; that Nature never copies herself; that art workmen ought, like Nature, not to be too exact, but to use freedom; that the artists of the olden time did so; for “the old builders’ workmen were really artists, they did as Nature does”—they made two parts of a design “tolerably alike and symmetrical,” but not exactly so. This may recall to mind the more celebrated and more forcible instance in which Mr. RUSKIN, the very high-priest of such transcendentalism, came across an ingenious observer who had taken the trouble to count the dentil-blocks on the two sides of a certain pediment, and had thereupon published to the world his discovery that one side had one more dentil than the other. Upon the head of this too-accurate explorer the “Oxford Graduate” poured forth in generous but relentless rage all the most scornful language of his vocabulary. Not that he himself would advocate the express cultivation of irregularity in that particular form; but for any one to take measure of the artistic fire with so mean a thermometer as the counting of dentils he took to be the very extremity of prosaic dulness, while the act of positively publishing to the world the discovery of a majority of one tooth was the uttermost folly of priggishness.

Now, it is perfectly true that Nature does not make the two eyes in a fine lady’s face so perfectly similar as she thinks they are, or place a gentleman’s nose always so faultlessly on the central axis of his countenance as he is accustomed to believe. No two hands are quite alike; no pair of feet; no two leaves in a forest of leaves. Art, on the contrary, at least of the common kind, is apt to feel dissatisfied if the rules of uniformity are noticeably violated. In architecture especially the designer and the workman are equally solicitous about the unimpeachable accuracy of all regularities; and if the President of the Institute, for example, were to discover now at Smithfield Market that one of his pediments had such a thing as a dentil more on one side than on the other, it may be reasonably supposed that he would condemn the faulty handiwork to be instantly taken down. How then is it, if Art is to go to Nature, and Nature never makes two halves of anything alike, that architecture must make her symmetries so unswerving?

The best answer to this puzzling question is the boldest.—If Nature never makes two things alike, it is because she *tries and fails*, whereas Art in just the same way *tries and succeeds*. The paradox here is not very profound; the facts of the case, indeed, lie on the surface. The artist’s manipulation of his work is comparatively simple, but that of the agencies called Nature is complicated beyond our calculation; so much so that while the workmen on a building turn out a thousand ornaments as much alike as so many peas in a pod are proverbially said to be, those very peas in fact, although all set

a-growing on the self-same model, are every one of them by some accident or other marred in the making; so that it is by reason of a thousand different combinations of accidental imperfection only, and not by the meritorious intention of Nature in any way, that no two of them all are mathematically alike.

Imperfection is therefore excusable and allowable in Nature where it is not so in Art, and the philosophy which would present this imperfection in the light of a variation of purpose to be taken as a divine law is illogical and illusory. No doubt the cultivated imagination accepts such natural irregularity to a certain extent as constituting in itself a grace—“a grace beyond the reach of art”; but for the artist to attempt to imitate this irregularity is not a grace, or, if it sometimes may be so dealt with as to please a specially educated mind, it must always be strictly kept within the limits of that intelligent design or foreseeing intention which is quite a different thing from the *abandon* of Nature. In other words, to teach *careless* or slipshod Art is a mistake of first principles, just as much so, for instance, as to inculcate Bohemian manners—which the admirers of such slipshod art, by the way, very generally do.

What, then, of that mechanical or metallic regularity which in certain modes of architectural workmanship becomes, no doubt, so frigid and spiritless? There is no reason why anyone should not acknowledge the fact that such cold clean-cut symmetry is sometimes so odious that the critic who is possessed of “feeling” is only prompted to wish that by the touch of some enchanter’s wand he could upset the whole into confusion anyhow. But what is the “feeling” that produces this impulse? Some will say it is a secret artistic conscience, the exercise of which is as much beyond our control as its laws are beyond our knowledge. But, on the other hand, some will prefer to think it is only “a wild kind of justice” which resents, not all symmetry, but a specific kind of symmetry overdone. In fact, the case is in a great measure one of artistic style, and of the consequent difference, in our age at least, of artistic training. To the keen-witted and elegant Greek of antiquity nothing architectural could be too symmetrically refined, or too finely polished, whether in design or in workmanship; this was the ideal of his style. To the blunt and rude Churchman of the Middle Ages, with a fighting noble on one hand and a stubborn churl on the other, both equally untaught and unteachable—even if he had been able and willing to teach them, which he was not—it would have seemed quite out of character that any building work, or any other work of the artistic kind, should be so daintily and delicately finished; his most intricate traceries, therefore, and most shapely mouldings, were, like himself, developed with a palpable rudeness which—there being good in all things—became a quaint masterly freedom: again a grace beyond the reach of art. It is not too much to say, indeed, that one of the weakest points in our ordinary revived Gothic has ever been the uncharacteristic precision of its workmanship. The authentic old work is always a little rough and ready in its handling, and often a good deal; and so far the critic who calls this going to Nature would be perfectly right if he were not calling it by a wrong name. But this kind of carelessness is not Nature’s kind of carelessness; unless we consent to state the case as we have done—that Nature seeks perfection and misses it by the interference of accident, whereas mediæval art sought it not and missed it not, but only fell short of it for want of delicacy in the handling.

There is a kind of symmetry, however, which in the modern European vernacular or Renaissance style seems to throw off an infinity of similarities, like the castings of the iron-founder or the plasterer, of which it may be truly said that, for want of that thoughtful finish, now mental rather than manual, which the old Greeks always manifested, the whole scheme of ornament seems to be as dead as a row of ninepins. This cannot be helped in such a country as England now is. Classical work, which ought to be instinct with the spirit of refinement, is too often so coarse and meaningless with us that precision is out of place, and the eye desires to see crude workmanship to support the crude design. If an antique Greek temple had been cut in crystal or in steel, as it was in marble of the best that could be found, the perfection of precision would have been still equally appropriate. There are many modern works in France, and some in England too, of which we might say the same. But just as in the case of the whole mass of the mediæval work the classic finesse was wanting, so also in the generality of the modern classic it is wanting no

\* See page 218 *ante*; October 7.



less. The management of terra-cotta—preferably a rough-and-ready management of a rough-and-ready material—is an excellent illustration of this principle. The production of ornamentation in red brick is another instance where polish is a profanation of Art. But it is a perversion of language to say this is “going to Nature”; it is only Art of one kind and not another, corresponding with conditions of one kind and not another. No doubt it is well worthy of study, and especially on the part of those whose temperament is not equal to the patient development of more delicate work; but this is all, as indeed this is enough.

## JEAN BAPTISTE GREUZE.—II.

BY A CORRESPONDENT.

(Concluded from page 246.)

GREUZE in 1767 had been ten years Associate of the Academy, and yet had not complied with its rules, which enjoin on each Associate to send a picture for approval within six months of election. This being considered as “contempt of court,” he was forbidden to exhibit at future Salons by a decree communicated with infinite precaution to GREUZE by COCHIN the engraver, then perpetual secretary to the Academy. To this mandate he replied in a letter DIDEROT characterises as an epitome of vanity and of impertinence. Unwilling, however, to forfeit the honours of the Salon, he set to work in earnest on a classical subject, utterly foreign to his style, and which proved a failure. The story he selected for his painting was an episode in the career of SEPTIMUS SEVERUS. On the reception-day GREUZE awaited in a room adjoining the council chamber the verdict of the Academicians. Suddenly the folding-doors of the *salle* were thrown open. GREUZE entered without the slightest trepidation. “Sir,” said the President, addressing him, “you are received as Academician.” The usual formalities accomplished, the President proceeded to make the following unpleasant remark:—“Sir, the Academy receives you as *genre* painter; your former works have won this distinction for you. This picture,” pointing to it, “is neither worthy of you, nor of the Academy.” Here was a blow, fatal to the vision GREUZE had conjured of obtaining a professor’s chair, as well as other official distinctions. With singular want of tact he attempted to defend the merits of the painting, which was literally out of drawing. DIDEROT himself dared not utter a word in favour of his friend. The scene was painful, and was succeeded by an ill-judged letter published in the form of a pamphlet, which the public carefully abstained from reading.

DIDEROT attributes the failure to the fact of his unfortunate domestic arrangements, and the consequent pre-occupation of his mind. Before his journey to Italy GREUZE had seen a woman of striking beauty at a *bouquiniste’s* shop. On his return he passed the same bookseller’s shop, and there again saw the type he afterwards frequently painted in the person of Mdlle. BABUTY. The lady made advances which GREUZE was too weak-minded to resist, and he unfortunately married the original of *La Voluptueuse* and of *La Mère bien-aimée* in 1773. In 1785 he appeared before the Commissary of Police as JEAN BAPTISTE GREUZE, peintre de l’Académie Royale, residing Rue Basse Porte, St. Denis, to complain that, although two children had been born to them, his wife had not only dishonoured his name, but likewise sold engravings of his pictures to the value of 2,000*l.* and subtracted drawings and even pictures from his studio, which she had bestowed on her various admirers, who thus undersold his finished works. GREUZE further states that in his utter misery he had moved from the Rue Thibotode to the Rue Notre Dame des Victoires, where he had been on the point of death, in consequence of the attempt Madame GREUZE had made to poison him by means of broth in which verdigris had been mixed. Scarcely recovered, he had seen his wife rise in the dead of night and approach his bed armed with a *vaso da notte*. He had but time to escape the destined blow. JEAN BAPTISTE next morning quitted the house, and invoked the aid of the police-commissary.

This state of things was certainly not conducive to the progress of art; but having obtained a divorce, he painted *La Pleureuse*, a *chef-d’œuvre* which attracted the encomiums of the Marquis DE MARIGNY, Surintendant des Beaux-Arts, to whom GREUZE remarked, with his usual self-assertion, that he knew the merit of his work, but yet was in want of orders. CARL

VERNET, his neighbour, replied by the truth, “It is because you have many enemies, and especially one, to whom you seem singularly attached, and who will prove your ruin.” “Who is he?” inquired GREUZE. “Yourself.” His pride was inordinate, but accompanied by so much ingenuousness that people were disposed rather to smile at its folly than feel anger at its manifestation.

The brevet conferring on GREUZE the lodging at the Louvre, vacant by the death of LA ROCHE, is dated March 6, 1769; it enjoins on its recipient to occupy the said lodging himself, and on no pretext to allow others to do so. The following year the King bestowed on him a sum of 1,500 livres to repair the lodging, which he, however, appears to have occupied but a short time at that period.

In his rage and mortification at the manner in which his *tableau de réception* had been received at the Academy, GREUZE quitted Paris and established himself for a time in Anjou, where he painted the portrait of Madame DE PORRIN, now in the Angers Museum. It was at this period that one of the best known of his works, *La Cruche cassée*, now at the Louvre, was produced. It is always a matter of difficulty to obtain a good view of it, so many are the easels which daily surround it. A young girl clad in white has gathered roses in the folds of her frock, on her right arm is a broken pitcher, a rose is nestled in her dark hair, she gazes at you with a tender, wistful expression. The deep blue eyes are veiled by unfallen tears, which are surrounded by shadow. Rose pink is the only tone of bright colour in the whole, and is repeated in the flowers in her white gown, in the bloom on her cheek, and in the ribbon in her hair. Madame DU BARRI possessed a reduction by GREUZE of the original, which was sold at the Marquis DE VERT’s sale in 1777 for 120*l.* At the MARIETTE sale a drawing of the girl’s head went for 80*l.*; but in March 1792, during the whirlwind of revolution, a pastel of the picture sold for 15*l.*, whereas in 1869 a mere pencil outline by GREUZE, at the Marquis MAISON’s auction, was eagerly secured for 92 guineas.

The death of LOUIS XV. by no means deprived GREUZE of the popularity which Court favour had obtained for him. His *atelier* continued to be the resort of all the rank and fashion of the capital, as well as of the distinguished personages who visited Paris. Among the latter was BENJAMIN FRANKLIN, who went there for the purpose of enlisting the sympathies of the young nobles of France in the cause of American independence, and also of obtaining the sanction of LOUIS XVI. to their armed co-operation with it. GREUZE painted his portrait at the same time as *La Malédiction paternelle*, now at the Louvre. GUSTAVUS VASA, the romantic young King of Sweden, who travelled as Comte DE FALKENSTEIN, was among the number of his visitors, and bestowed on GREUZE the rank of baron, and, what was perhaps more useful, a gift of 4,000 ducats. Madame ROLAND, the beautiful and gifted martyr of liberty, describes a visit she paid the studio in September 1777. *La Malédiction paternelle* was then on the easel, as also the *Cruche cassée*. Of the latter she writes, “On ne peut rien voir de plus piquant et de plus joli.” She said to GREUZE, “The only fault I find with it is, that the little girl does not appear sufficiently sorry for her misfortune. I fear she may return to the spring.” Emperor JOSEPH II., on his first visit to his sister, Queen MARIE ANTOINETTE, likewise was among those whom love of art attracted to the studio. He asked GREUZE whether he had been in Italy. On the artist replying in the affirmative, the Emperor said, “You did not find your style there; it belongs exclusively to you. *Vous êtes le poète de vos tableaux.*” A double meaning may be given to the imperial compliment. Madame ROLAND, in the letter in which she relates this anecdote, admits that she was sufficiently malicious to emphasise it by saying, “It is true that if anything can add to the charm of your work it is the description *you* give of them.” She adds, “I was three-quarters of an hour in the studio. I took MIGNONNE with me. There were several visitors, but GREUZE spoke chiefly to me.”

M. DE GONCOURT’s lucid comments on the causes which contributed to GREUZE’s style are worth translating verbatim. He writes as follows:—“Charity in the latter end of the eighteenth century had become a romance of the imagination. Society caressed the image of Virtue, which it tricked out as though it were a doll. Dukes on their estates bestowed crowns of roses on village virgins, which the ‘impures’ of Paris applauded. Trianon, a little opéra comique village, was built next to the Palace of Versailles. It only suggested a decoration for SEDAINÉ’s theatre. The King had the good-heartedness of



a farmer. He turned up his lace ruffles to help a carter to drag his waggon through a muddy road. The queen herself was drawn in the *Traits d'humanité*. GREUZE is the unconscious exponent of this sentimentalism, so soon engulfed in the sea of trouble of 1789. GREUZE personifies *La Dame de Charité* in the features of his own wife, and that picture may be said to embody the spirit of the period. *La Paix du ménage*, *Le Paralytique servi par ses Enfants* (now in the Imperial Gallery of St. Petersburg), *La Grand' Maman*, *Le gâteau des Rois*, and *La Maman* are all inspired by the same false sentiment. Rustic felicity he further attempted to render attractive in *Les Sévères* and *Le Retour de la Nourrice*. CHARDIN's pictures of rural life produce a totally opposite impression to similar subjects painted by GREUZE. There is a wholesome tone, a robust life, a truth to Nature in CHARDIN, which does not exist in GREUZE, in whose works there is something sensual in form, colour, and even a certain *coquetterie friponne*, rather suggestive of the CLAIRONS and CHAMPMESLÉS of the day than of the hardworking peasant mother honestly gaining bread for her children by the labour of her hands, which these pictures are supposed to bring before the public. The innocence depicted is that of Paris at the close of the eighteenth century. The type GREUZE paints of the *ingénue* is decidedly the one which was his greatest success.

GREUZE, after his separation from his wife, had formed an association with MASSARD, GAILLARD, LEVASSEUR, and FLIPART for the engraving and selling of his works. For many years his pictures fetched high prices both in France and abroad. BAUDOUINS' and LAWREINIES' licentious engravings were replaced on the walls of old manor-houses by GREUZE's *soi-disant* pictures of Virtue in humble life. The prints were issued in every variety of form, proofs *avant lettre*, without the royal escutcheon and with it, without the title of *peintre du roi* and with it, with GREUZE's signature at the back and without.

Even as late as July 1792 an annual pension of 1,537 livres 10 sols was conferred on GREUZE by LOUIS XVI. as a reward for his talent in painting. Six months later the head of him whose last acts thus testify to the kindly nature of the man fell to the plaudits of the champions of the liberty whose first year of power was cited in the grant. GREUZE survived his reputation; he endured the extremest want, and suffered yet more from the utter oblivion which swept over his name, to a nature such as his more agonising than cold and hunger.

GREUZE executed one etching. It is the reproduction of a little girl, whose head leans on her left shoulder; a slight handkerchief is carelessly thrown over her head. It is signed with a G and two points. "J. B. GREUZE del. et sculp." on a proof sold by DEFER, proves its authenticity. GREUZE executed the portraits of PIGALLE in 1757, of the Dauphin (afterwards LOUIS XVI.) in 1761, of the Duc de CHARTRES (Egalité) and of his sister in 1763, of CAFFIERI and of WEILLE, 1765, as well as of Madame GREUZE. His portrait of CATHERINE II. was etched by GAUCHER, that of DIDEROT was engraved by A. DE ST.-AUBIN and of Miss HERVEY by CHATELET. Among the most fascinating of his portraits is one which was exhibited at the Exposition Alsace et Lorraine, where the art treasures of France were collected. It was of the beautiful Marquise de CHAMPCENETZ, and represented a young woman of the world, whose loveliness had the charm of sweetness. She was *coiffée à la Lamballe*, which fashion set off the exquisite chiselling of her features. The portrait now belongs to the Comte de GRIFFULHE, and has never been engraved. The Comte de LA BORDE possesses a portrait of his ancestress, Madame d'ESCARS, by GREUZE, and the Comte de BELLEVAL one of Madame de VIETTE, with a letter from GREUZE, in which he acknowledges the sum of 25 louis for the portrait, which he takes care to add he painted for friendship rather than money.

Religious subjects were as little in GREUZE's line as hymns in TOM MOORE's, but of those he attempted *Mary the Egyptian* is the best known. Prince LUCIEN BONAPARTE commissioned GREUZE, then in his old age, to make him a replica of this subject. In 1869 either the original or this replica was purchased at the Marquis de MAISON's sale for 800 guineas. An allegorical subject, *L'offrande à l'amour*, has been made popular through its engraving. The original was purchased from GREUZE by the Duc de CHOISEUL in 1772. It was sold in London in 1793 for 33*l.*, and resold at the Cardinal FESCH's sale at Rome, 1844, for 6,160 scudi Romain. *Le triomphe de l'Hymen* was painted for the Comte d'ARTOIS, and

a replica of it was sold to Russia by the Comte d'ESPAGNAC. Two of the heads in this *Triumph of Hymen*, PSYCHE and LOVE, were separately reproduced by GREUZE. The one cost the Marquis of HERTFORD 1,800 guineas, and the other was purchased by NAPOLEON III. for 1,200 guineas for a birthday present for the Empress EUGÉNIE, who presented it to the Grand Duchess MARY of Russia. It was exhibited at the Exposition Rétrospectif by permission of the Grand Duchess in 1866. Forty-five of his scenes of rustic life have been engraved, as have sixty-eight of his heads of children and young girls. The latter are certainly the most popular of GREUZE's works. Among these the best known are *La Cruche cassée*, *La Petite Fille au chien*, *La Belle Boudeuse*, *la Bacchante*, *La Modestie*, *Le Petit Frère*, and *Le tendre Désir*. The latter, engraved by MASSARD, was sold (1785) at the Marquis de VERI's auction. A reduction of it, once the property of the Marquis de MONTCALM, is now in the possession of Vice-Admiral OLIVER. Fuller details with regard to the biography of GREUZE will be found in the writings of that erudite art critic, M. ED. DE GONCOURT, to whose works on art we are so largely indebted.

#### METROPOLITAN BUILDING ACTS.\*

THAT the Acts relating to building in the metropolis are not popular is seen from the first sentence in the preface to Mr. FLETCHER's edition of them. It is many years, he says, since any edition of them has been published containing notes, diagrams, plans of chimneys, and the like. The reason for this is plain. To every one except the gentlemen concerned in their administration the Building Acts are a necessary evil, and one which presses heavily upon honest people. An architect or a builder having the least pride in his work would, if there were no Acts, produce buildings quite as substantial and as free from risk as those which are supposed to be rendered secure by the observance of prescribed formalities. But since the Legislature was not competent to devise a better means of checking dishonest and dangerous work than by the assumption that it was general, the Acts must be accepted. Mr. FLETCHER is sanguine if he supposes that diagrams or reports of cases, however numerous, will make a copy of the Building Act to be "well received by those who most use the Act," unless, indeed, by the users he means district surveyors. The Act can never be expected to be well received by London architects and builders. The most that can be said is that when reports of cases are introduced, the necessity of carefulness in complying with the letter as much as the spirit of the law becomes more apparent. Looked at in this light, Mr. FLETCHER's book will be found to have great utility, and a study of it may save architects and builders from many annoyances. There is an abstract of the sections of the Acts which might advantageously be also printed separately in a more portable form; the diagrams are clear and accurate, and there are copies of bylaws, notices, and other documents. It is also convenient to have parts of different Acts which are related brought together, as is done in this book. But the printing of the volume might have been improved by the use of a greater variety of type so as to indicate subjects, by keeping the clauses further apart, and by giving wider margins. No one cares to spend much time in a study of the contents of a work of this kind, and every mechanical means should be adopted to facilitate reference.

The Building Acts, although important enough in their way, form part of a class of law with which lawyers of repute do not care to meddle. Like the old Roman *jus gentium*, which was administered by the prætors, the Acts are not attractive to nobles of the robe. Cases under those Acts are seldom discussed in the Superior Courts, and when they are the judges seem to be indisposed to reverse the decisions of the magistrates. There is so much that is petty and trumpery about the generality of the cases as to make the police-court the fittest place in which to hear them. It is a mockery of law to put in motion the elaborate machinery of one of the Superior Courts in order to determine how many varieties of fees can be claimed by a district surveyor for a single inspection of a builder's work.

\* "The Metropolitan Building Acts: a Text-Book for Architects, Surveyors, Builders, &c." By Banister Fletcher. Published by B. T. Batsford. "The Metropolitan Management and Building Acts Amendment Act, 1882." By Alfred Emden. Published by Stevens & Haynes.



The cases which have been selected by Mr. FLETCHER form a very curious collection. In one, with which he himself was concerned, it was laid down that a wooden structure on wheels was a building. Although the owner cut it in two and removed one half, he was not able to escape his liabilities, and he was fined. In 1874 it was decided that a wooden fowl-house was a building, and on another occasion it was demonstrated successfully by a district surveyor that the existence of a roof was not necessary to constitute a building out of a wooden enclosure. It would be difficult to say how little in the way of sides is sufficient to form a "building" in the eyes of magistrates and surveyors. Even an advertisement hoarding comes under that category if a few strips of wood are attached to it to enable the canvas to resist buckling. We have heard of a case in which a zealous assistant endeavoured to raise a claim against a man who threw a tarpaulin across an open passage on a wet day, and the enclosure thus formed might with more justice be interpreted to be a "building" than many of those things which have given occasion to the imposition of fines. That obnoxious phrase "combustible structure" is so universally applicable, the public ought indeed to congratulate themselves upon the forbearance of the district surveyors. If we may conclude from the reported decisions, the only things which appear to be beyond the Acts are a wig-box and a bird-cage; but, according to Mr. Justice BYLES, the latter must have a handle for lifting it from the ground.

It is needless to say that many of the cases in Mr. FLETCHER'S book relate to fees, for the peculiar character associated with the Acts in the metropolis is mainly owing to the arrangements which have been framed for the payment of the surveyors. Some restriction on claims was introduced by a judgment of Lord BLACKBURN, in which it was laid down that fees are payable when they become due by the person who at that time answers the descriptions of builder, owner, or occupier. In other words, fees cannot be claimed from a stranger several years after they were incurred, although he may have received "a proper bill" from the district surveyor. But if the successors of the owners of a building are not held to be responsible for their predecessor's debts, the workmen and labourers who may have been employed on the building are less fortunate. It is recorded in Mr. FLETCHER'S book how a journeyman carpenter, who was very civil to the district surveyor, was summoned because his employer failed to comply with the requirements of the Act. He was fined, and in default was ordered to be imprisoned for ten days. The defendant, it appears, said he had no money, and accordingly he was removed in custody. The unhappy scapegoat was, we suppose, unable to appeal; but he has gained notoriety, for henceforth he becomes an example to all metropolitan workmen. Mr. FLETCHER warns them that "the Court will severely punish those who endeavour to evade the Act," or, as it is better expressed in the same sentence, those who "evade payment." It must be satisfactory to the district surveyors to be assured that the definition of builder in the Acts is "most comprehensive." "It includes," says Mr. FLETCHER, "not merely master builders, but every journeyman of every trade who shall do any work where there is no master builder." But if subcontractors are not bound to give notices, it is hardly equitable to insist on every journeyman of every trade sending them to the district surveyor. The importance attached to the Acts as a source of fees is suggested by the number of cases which are given by Mr. FLETCHER to throw light on this part of the subject.

The builders whose names appear in the reports of the cases in Mr. FLETCHER'S book do not represent the average standard of morality of the trade in the metropolis. They belong rather to the class for whom bylaws have been specially formulated, and they seem to be proud of outwitting the district surveyor. In one of the earliest cases given, where the builder says he will adopt a more economical plan, it is evident that the reason is that by means of the alteration the Metropolitan Board of Works and the district surveyor will be rendered powerless. The use of improper materials in jerry-built houses in the outlying districts of the metropolis has often given occasion for the Acts to be exercised, but it is noteworthy that no cases are cited which can be said to refer to ordinary buildings. No respectable builder is likely to be punished for building walls that are not properly bonded and solidly put together. It is therefore hard when a firm of builders or contractors, who may have sustained a reputation for excellent work, are summoned to a police office on account of some

trifling matter, or in order to test a new reading of the Acts by the surveyor. And this suggests another of the peculiarities of the administration under the Building Acts. How does it happen that cases are perpetually cropping up in certain districts while they seem to be unknown elsewhere? There are many district surveyors whose names are never heard of in the newspapers. Are we to conclude that the builders in their districts are exceptionally moral? or might not another reason be given to explain the phenomenon? There are some men who are born litigants, and woe to the parish in which one of them succeeds in gaining an appointment as a district surveyor. But the difference in the amount of litigation between districts is so remarkable that we are surprised the Board of Works do not issue a map (like those adopted for infectious diseases) in which red dots might be made to indicate the relative disregard of the Acts by the public, and the energy of the surveyors in having culprits mulcted.

Mr. EMDEN has supplemented his valuable book on building law by an edition of the Amendment Act of 1882, which is printed in a convenient form. Notes explanatory of the clauses and of procedure under the Act are appended, in which the pith of the matter is given in a few words.

### MR. MORRIS ON DECORATIVE ART IN ENGLAND.

A FINE-ART and industrial exhibition was opened on Friday last week, in St. James's Hall, Manchester, by the Earl of Wilton. At the luncheon which followed the chairman, Earl Wilton, proposed a toast to the success of the exhibition. Mr. William Morris subsequently responded to the toast, "English Decorative Art," proposed by Mr. Woodall, M.P., as follows:—

I think we may without rashness congratulate ourselves on the progress made in decorative art of late years. I should be loth to speak slightly of any of the brotherhood to which I belong, past or present. But the plain fact is, that some twenty-five years ago the arts of mere decoration were in such a state that one is bound to say that they looked as if they were coming to an end; of the traditional part of them there was, in England at least, scarce any more left than there is now, *i.e.* nothing. On the more obvious and self-conscious side there was nothing stirring. What individual talent was left could only show itself in eccentricities that most often deserved to be called by any other name rather than decoration. The public was as blankly ignorant of the history of the art as the designers were of its first principles. The contempt with which the whole subject was treated in those days is shown pretty clearly by the law which relates to the copyright in industrial designs, which, strange to say, is to this day all the protection accorded to them. The framers of that law doubtless wished to secure to manufacturers all reasonable advantages for those designs which they had paid for or invented; yet to this day it is only possible to protect such designs for three years; three years seemed at the time when that law was made ample time for a manufacturer to reap all reasonable advantages from any design he might produce. I don't think I need make much comment on that. Well, really, I must say that twenty-five years ago it did not much matter whose design you got hold of. They were all much the same, and did little but spoil the materials out of which they were made.

I well remember when I was first setting up house, twenty-three years ago, and two or three other friends of mine were in the same plight, what a rummage there used to be for anything tolerable in the way of hangings, for instance, and what shouts of joy would be raised if we had the luck to dig up some cheapish commonplace manufacture, which, being outside the range of fancy goods, had escaped the general influence of the vacuity of the times. On the whole, I remember that we had to fall back upon turkey-red cotton and dark blue serge; since even the very self colours of fancy goods had grown to be impossible, which is the more inexcusable as at that time the beneficent march of science and commerce had not yet destroyed the ancient and worthy traditions of the craft of dyeing as it has since done. My lord, this last sentence shows itself to me like the skeleton at the Egyptian feast, and reminds me that I have something else to say than self-satisfied triumph over our advance on the blank nothingness of the first half of the century. Yet certainly that advance has been made—a reaction from ugliness to beauty has touched at least some part of the people who live among civilisation; and in what we technically call the decorative arts this new Renaissance has been helped in this country by many agencies, not least among which has been the steady endeavour on the part of the Department for Science and Art to spread artistic education among the public in general. Some of the results of this new Renaissance are now before the people of this great city, and I think I may say that they very fairly represent what has been done in the arts of decoration since the change I have been speaking of took place. Nor am I



ashamed, in the name of my brethren in the craft, in the first place, to beg some tenderness from the public for our shortcomings, considering the difficulties we have had to fight against; and in the second place, to remind them that things have changed—that no young housekeeper need now take so much pains for such a scanty result as I had to do in 1859; that anyone can now find in shops all over the country goods at commonplace prices, which both intend to be and are beautiful, and more or less marked by artistic individuality; that, in short, anyone who chooses can make the interior of his house comely and pleasant without an unreasonable expenditure of time and trouble. Now I will not ask my craft-brethren to be content with my using no greater words in praise of our noble selves than these, which after all do seem to me to imply great encouragement to us all, for something more I have to say before I sit down. I am always asking myself, Is this apparent success real, is this seeming advance of a quarter of a century going somewhere or nowhere? That is a serious question, to which it is impossible to answer aye or no. But after all to us as practical people it does not matter much whether it can be answered directly always, so long as we see clearly what are the conditions of the health or disease, the life or death of our art. In short, so long as we can see what work is immediately ahead of us to maintain our art in a hopeful state. Now, to my mind, it is not so very difficult to see this. Firstly, we have, to put the matter in its simplest form, to interest the whole public in the work. Firstly and indeed lastly, there is nothing else for us to do. That once done, the whole public will see to this matter. Well, that is easy to say and very hard to do; short to say and very long to do; and yet we must set to work about it, unless we æsthetic upholsterers are content to be what I am afraid many people think us—contemptible waiters-on, or mere pleasure-seekers and triflers with life. For in truth these decorative arts, when they are genuine, real from the root up, have one claim to be considered serious matters which even the greater arts do in a way lack, and this claim is that they are the direct expression of the thoughts and aspirations of the mass of the people, and I assert that the higher class of artist, the individual artist, he whose work is, as it were, a world in itself, cannot live healthily and happily without the lower kind of art—if we must call it lower—the kind which we may think of as co-operative art, and which when it is genuine gives your great man, be he never so great, the peaceful and beautiful surroundings, and the sympathetic audience which he justly thinks he has a right to. If you compel a Michael Angelo to live in a world of dullards and blunderers, what can happen to him but to waste his life in ceaseless indignant protest, till his art fades out in sour despondency and his whole career has turned out a useless martyrdom? Great minds need no slaves to rule over, but rather fellow-workmen whom they can help and be helped by. So I say that the decorative arts are as necessary to our life as civilised men, nay as men, as the more strictly intellectual arts are, and that that which has become our end and aim, to wit, the new birth of popular art, as on the one hand it is a most arduous, so on the other it is a most worthy undertaking. Such great works both make the utmost courage necessary and inspire us with the necessary courage for carrying them out. Striving to arm myself with that courage, I will venture still to try to tell you what seem to me the chief difficulties that we have to face in our undertaking, and will beg you also to be courageous in listening to my few last words; since courage, as you well know, is the very mother of kindness and good nature.

Well, once for all, I am afraid I must admit that the public in general are not touched at all by any interest for decorative art; a few of the upper and middle classes only have as much as heard that there is such a thing as decorative, which should be popular art. How could it be otherwise? Consider. That lapse of all the arts of decoration that I began by speaking of, and which got to such a pitch at last that it became unbearable to some of the cultivated part of our population, that paralysis of the art was brought about by commerce (so called) forbidding the exercise of art as an essential part of manufactured wares. Time was when all manufactured wares had some claim to beauty, and, other things being equal, the most beautiful thing was the most marketable. I fear we cannot say that this is the case now. Pray excuse me for drawing an illustration from a very interesting and useful class of goods to which we are none of us strangers—printed cottons. If you turn over the pattern books of this or that cotton printer in this city, you will find many patterns which are exceedingly pretty, while some of them are exceedingly—well, ugly, as I am sure the gentlemen who print them will admit. Now, having the honour of the acquaintance of a cotton printer in this city, I am able to say that, so far as I could understand, the ugly patterns sell quite as well as the pretty ones. Now, you know, if the decorative arts were in a healthy condition, instinctive good taste would refuse the ugly patterns and demand the pretty ones, and so prevent what I must consider a degrading waste of money, time, and intelligence; for what in its way can be more wasteful than using all the accumulated knowledge and skill of centuries in spoiling the fair white surface of a piece of cloth by putting a pattern on it which you know to be ugly?

And in like manner it fares with all the other industrial arts. If a manufacturer determines to be also somewhat of an artist (as

he most certainly should be), and to turn out nothing but what may do credit to his own reason and intellect, he must also make up his mind to give up a great part, probably the greatest part, of his business; and I will say at once, before I go further, that if a good few of our makers of common wares were so much touched by the importance of the decorative arts of England as to do this, it would make a new era in that advance of the art which I have been speaking of; and if we could add to such a sacrifice of apparent welfare an obvious and lively interest on the part of the public in the processes and methods of the art, I do think we should be nearing our goal. For at present the divorce of commercial manufacture from art has made the public bad marketiers; too often they don't know what they are buying. Often I have had it said to me when I have been showing my friends some process of designing or making a piece of goods, "Dear me, I had no idea that all that trouble was necessary." In short, it seems to be generally believed by a people, to my mind, somewhat overdone by machinery, that works of minor art can be and are turned out like the sausages in the mythical Yankee machine—live pig at one end, sausages at the other. Whereas in truth every work of art, however humble, as on the one hand there has gone to make it real human pleasure of body and mind, so on the other every stage of its making has been attended by painful care, anxiety, and chance of failure. And this it is, this play of hope and fear, joy and sorrow over it, which makes it what we call a work of art; indeed, we may well call it a work of nature also.

That word "nature" reminds me that I have still something to say to you, if I do not weary you overmuch. The divorce of commerce from art has been wasteful of more than the works of man's industry, and in many places, and I must say nowhere more than in South Lancashire, has made the advice which we must always give to all students of art to go to nature somewhat of a mockery. Believe me, I do not speak of this or any other evil wantonly, but with the hope of, in my small way, encouraging those who are fighting against it; and indeed fight against this evil we must, if we are to have decorative or any other art for long. The choice lies before us, which will you have, art or dirt? In the long run I believe you will find art the cheaper of the two commodities; for if we choose dirt we shall make England, all of it sooner or later, what it was not meant to be, an uncomfortable country, and discomfort breeds discontent, and discontent—what will that bring forth in this land of stout-hearted men?

This is far from being beside the question; it is English decorative art I am speaking of, and can we forget what the country is like which bred that art as it once was, which has made an ancient English house, for all its simplicity and rudeness, the loveliest of the habitations of man? Surely my voice is speaking the thoughts of many people when I plead with the mighty and overwhelming commerce of England to spare the source from which all English art has sprung, what is left us of the land of England, with all its growth of familiar beauty, sweetened every acre of it with the memories of the men that made us. When that plea is listened to, and we make up our minds, first, to keep all we have left us of fair and unspoiled country and dwellings, and, second, to replace what we have lost by a reasonable and living art which shall really express our lives and their aspirations—I say when we have made up our minds to do this, then is all gained. Nature, which has covered with her kind hand the battle-fields of the Edwards and Henries and Charleses, will in one way or other, when we call upon her, do no less for the battle-fields of commerce. Our scientific men, who to me, an outsider, seem able to do anything they care to do, will have shown us the right use of carbon and sulphuric acid, and the sun will shine as brightly through the boughs outside the factory windows in Lancashire as it does through the Kentish hop-garden. I think those days will come, wild as the prophecy seems. We shall not see them. Who cares, since we amongst others shall have worked to bring them about? Nor will anybody in those days need to talk about English decorative art, for everyone will have it ready to his hand; like the company of a friend with whom one can talk if one wills, or be silent with if one pleases, so restful, so familiar shall it be.

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**The Tower.**—The large block of buildings situated within the Tower of London, which for nearly two centuries past have been used as the Ordnance Office and Stores, was on Monday sold by Messrs. Horne, Eversfield & Co. by order of the Commissioners of Her Majesty's Works and Public Buildings, preparatory to their being taken down to clear the site for the restoration of the Lantern Tower, which formerly stood on a portion of the site occupied by the buildings about to be demolished. The Ordnance Office, now so shortly to disappear, is a spacious block about 150 feet in length and 90 feet in depth, and is carried to a height of upwards of 70 feet, consisting of a basement and five lofty floors. The materials were divided into 129 lots, most of which fetched little more than nominal prices. The original cost of the building, which is of unusual strength, is said to have been upwards of 60,000*l.* The site is to be entirely cleared in six weeks, when the Office of Works will proceed with the work of restoration.



## BEWICK AND MODERN WOOD ENGRAVING.\*

I THINK it will not be disputed that the modern impetus which the practice of wood-engraving has undoubtedly received is due in great measure to the efforts of Thomas Bewick. In a certain sense Bewick may be said to be the inventor of wood engraving as a separate art, for he was the first to adapt himself with readiness and complete submission to the peculiar technical conditions which the wood-block suggests.

It may seem at first sight that this statement is in contradiction to what has already been said as to the excellence of the earlier engravers; and it is therefore important that I should define clearly what is meant in thus ascribing to Bewick a position of such importance. The praise which has been bestowed upon the earlier engravings is due to them in virtue of the completeness with which they fit themselves with printed books; but of course it would be unfair to allege that wood engraving must be altogether confined to the duty of illustration. It has a right, if it can prove its efficiency, to exist as a separate and independent art and it is from this point of view that Bewick's influence is to be considered.

To my thinking, not even the best and most skilful of Bewick's cuts can be compared for beauty to the broad simple manner displayed in the *Ars Moriendi* or the *Dream of Poliphilo*; but when Bewick applied himself to the art it had already passed far beyond the point at which it had arrived when these books were produced. A greater demand for completeness of pictorial effect had introduced a more elaborate system of workmanship, a system based, as I have already explained, not upon the peculiar conditions of the wood-cutter's craft, but upon the more or less slavish imitation of the processes proper to engraving on metal. It was Bewick's triumph to discover a means by which this greater elaboration can be more simply and more appropriately secured; and in order to understand the nature of this triumph we must remind ourselves again of the means by which a picture is produced upon an engraved block.

All earlier work, it must be repeated, was founded upon a direct imitation of an original drawing. Bewick's practice, on the other hand, consists in a direct use of the block itself; he was not in any sense a *fac-simile* engraver. In order to explain his position in regard to his art, I may quote the words of a writer who has offered an enthusiastic vindication of Bewick's powers.

"Through the three centuries and a half," says Mr. Holliday in an interesting series of articles contributed to the *Magazine of Art*, "which elapsed between the 'St. Christopher' and the time when Bewick began his artistic career, there is no sign that any artist who dealt with wood-engraving recognised that the process consisted in cutting out lights, and that by confining it to the imitation of black-line drawings they weighted it hopelessly in its competition with other arts."

"If the view already expressed," continues Mr. Holliday, "be correct, wood-engraving proper commenced only with Thomas Bewick, the work of this remarkable artist being in no sense a development of that of his predecessors, to which it is throughout opposed. Accepting as the obvious and unquestionably characteristic peculiarity of the wood-block, its unequalled power of giving clearly-drawn whites on a dark ground, as contrasted with engraving on copper, which proceeds by engraving black lines on a white ground, we find first that the earlier engravers ignored this capacity, but attempted such simple work only that it was always easy to execute, though quite uninteresting when done. When they had such designs as those of Dürer or Holbein to cut, the result was highly valuable; but, inasmuch as the engraver's work was purely mechanical, and left the resources of his material wholly undeveloped, his craft cannot be called an art. Instead of cultivating an art proper, he was imitating another art, that of pen-and-ink drawing on a material indifferently adapted to the purpose, his sole object being the production of many copies. It is quite clear that it never occurred to either artists or engravers that wood was capable of more than this. Secondly, we find that Bewick discovered the true powers of the wood-block, and gives us for the first time engraving in which white is cut out of black, and where we find no attempt made to force the material into the unnatural imitation of scratching, cross-hatching, or any other mode for which it is unfitted; and thirdly, we find that a great number of modern artists who draw for wood, and engravers who cut the drawings, pass over Bewick's work, and, recurring to the old, false, and hopeless principle of imitating other and antagonistic arts, aim exclusively at qualities in which wood is infinitely surpassed by etching, and leave untouched those in which etching would be as completely outstripped by wood-engraving."

According to Mr. Holliday's contention, Bewick's perception of the capabilities of the wood-block is based upon an essential principle in the rendering of nature. "A little reflection," he says, "or, what is better, a little observation, will show us that nature, as a rule, exhibits objects light on a dark ground;" and he therefore proceeds to contend that that process will have the advantage

in which lines are taken out with the greatest ease, in which the objects are drawn with light instead of being drawn with darkness. I am not disposed to contest Mr. Holliday's generous estimate of Bewick's genius. Assuming that wood engraving is to exist as an independent art, he is, I think, unquestionably right in asserting that Bewick was the first to perceive the true means by which the block might be utilised for this purpose. In so far, then, as it may be regarded as a direct means of artistic expression, the conclusion we should seek to establish may be said to be incontrovertible, for it is obvious that the distinction so often insisted upon between the processes of wood engraving, or the processes of etching or engraving on copper, suggests a very important difference in the manner of working.

It is this fact which leads Mr. Linton, the eminent living professor of the art, to declare that all true wood engraving is produced by the use of what he terms the white line. If, therefore, we suppose the case of an artist working directly from Nature upon wood, we may readily acknowledge the method described by Mr. Linton and Mr. Holliday to be the most appropriate to the means at his disposal; but, as a matter of fact, wood engraving has very rarely been used as a means of independent expression. The causes which have determined the use of this particular process are of a practical rather than of a purely artistic character. The wood-block offers the readiest and the most economical mode of multiplying copies of a design, and it is for this reason that it has been so constantly employed for the illustration of printed books. If the larger principle for which Mr. Holliday contends were true at all, it would hold good as well for the draughtsman as for the engraver, and we might therefore expect that drawings would, as a general rule, be executed with a white pencil upon black paper. It is obvious, I think, that to accept this logical inference would be to place the pretensions of the wood-engraver upon too high a pedestal. The practice originated by Bewick must be taken as indicating a convention necessary to the art, as he understood it, but having no basis in a deeper principle.

It was a happy inspiration which led Bewick to perceive that a harmonious and consistent result might be produced at an expenditure of less labour than earlier engravers had been forced to bestow. His art, as he practised it, is not an art of reproduction or imitation; it is essentially a means of expression, and in his blocks we get the first independent experiment to give to wood engraving, by means strictly appropriate to the material, the force and variety of tone that we find differently expressed in a painting or an engraving on copper.

Bewick's blocks are, within their limits, complete as pieces of pictorial illustration; they do not suggest the existence of any drawing in another material from which they have been copied, nor, on the other hand, do they convey the idea that the artist has been attempting to reproduce the effects of a work in colour. Since his time wood engraving may be divided into three distinct categories. There is first a style developed from that which he originated, and which depends upon a wholly independent treatment of the wood-block. Secondly, there has been, as I pointed out in my last lecture, a developed style of *fac-simile* engraving, not different in principle from the earlier manner, but admitting greater variety of effect, and simulating with more adroitness the individual manner of an artist's sketch. Thirdly, we have a great mass of modern wood engraving which applies itself to the task of imitating the appearances and results of other arts, either in painting, drawing with the brush, or in sculpture.

Let us now consider these different styles in their order. Bewick's method, in the most familiar and celebrated examples of his work, consist not in the use of lines at all, but in the cutting away of irregular spaces. He works from the black surface of the block, with a desire to retain as much of it as possible; and he therefore expresses himself less by definition of line than by contrasted masses of light and shade. In fact, to quote again the words of Mr. Holliday, "the picture is drawn in white upon a black ground, and his blocks are executed in such a way as to suggest that he had previously made a drawing in this manner."

This mode of work has its counterpart among the processes employed by the engraver on metal in what is known as mezzotint engraving. Here, as you are aware, the whole surface of the plate is ploughed up, so that when filled with ink it produces a uniform impression of the deepest tone. Upon this dark background the engraver then proceeds to register his picture by scraping away the lights. In proportion as he restores the even surface of the plate he secures the highest light, and by graduated strength of execution he is able to represent with the utmost subtlety all the most delicate refinements of light and shade. The same subtlety and refinement are not possible to the wood-engraver, but it is possible to work upon the same principle; and it was this principle which Bewick's genius enabled him to apprehend. In the representation of objects in nature an artist may proceed either by mass or by line. He may first define the forms, and then afterwards add by successive lines the sense of contour and solidity; and in work so produced it will always be easy to perceive that the bounding lines of the picture have been established first, and that the truths of tone, which give roundness and reality to the picture have subsequently been added. Or he may, if he chooses, proceed at once to translate the appearances of Nature by careful

\* From a report of a Cantor lecture by Mr. J. Comyns Carr, published in the *Journal of the Society of Arts*.



disposition of masses of light and shade, and then, according to this system, the outline will come unsought as the result of contrasted strength of different depths of tone. It was in the use of this particular method that Bewick's originality is most clearly displayed. He cannot be said to have absolutely discovered the idea of working in white on black, for some of the initial letters in the earlier-printed books of Italy are executed upon the same plan; and in the print-room of the British Museum there are one or two large wood engravings of the human figure which display a like perception of the facilities which the wood-block offers for such a mode of work. But Bewick, if he did not absolutely originate the style, nevertheless uses it with the happiest effect in his careful and elaborate engravings of animals and birds. Nothing could be more admirable than the skill with which he conveys the sense of delicate tone and texture of a bird's plumage; and it is remarkable that the realism which attaches to this part of his work is often strangely in contrast with the crudely-executed details of background.

But there is another class of engravings by Bewick in which a different method is pursued. In treating landscapes he proceeds really upon a totally distinct principle to that which guides him in his more careful and elaborate rendering of animals. Here his endeavour is not merely to register form, or even to simulate effects of texture, but to indicate the impression of a tint, and this he does with superb skill by the use of what Mr. Linton has called a white line. By varying the thickness of the lines that he cuts away, and therefore conversely of the line that he leaves, he succeeds in giving every variety and delicacy of tone.

This is the phase of Bewick's art which may be said to have been most fruitful by way of example to more modern engravers. The originality of Bewick's achievement is the more remarkable seeing that there is nothing in the circumstances of his education which could in any way have assisted his progress. Having at an early age exhibited a certain taste for drawing, he was apprenticed by his father to Mr. Ralph Beilby, an engraver, to whom he was bound for a term of seven years; but Beilby was an engraver on copper, and for some time the young Bewick was employed in the rougher sorts of copper-plate work, even including the execution of brass plates for street doors, and of crests and initials on watch-seals and silver plate. At the expiration of his apprenticeship he seems to have formed a resolution to apply himself altogether to wood engraving; and it is noticeable that his earliest essays prove that he had not yet abandoned the traditions which belonged to his practice as an engraver on copper. But it was not long before he struck out a new path of his own, in which he showed that he had reflected for himself upon the resources of his art, and that he brought to its practice not merely manual skill and dexterity, but individual artistic power and an individual technical style.

I shall not dwell at length upon that particular manner employed by Bewick, which consisted, as I have said, less in the use of lines than of masses of light and shade. It has not yet been fruitful in any remarkable development among later engravers, though it is clear that in the hands of a man of distinct gift it might be made to yield new and interesting results. That it could ever take a foremost place as a means of interpreting Nature is not to be said, for it would always be necessary to acknowledge and accept a distinct convention upon which it is founded.

A far more important influence on wood engraving may be traced to Bewick's use of line. Here also his practice shows a due regard for the limitations of wood engraving, and it has been found capable in other hands of producing work of singular excellence and refinement. In its essence this style of engraving may be said to be the converse of that which was employed by the earliest artists; they laboured with a view to producing effect by the use of well-defined black lines in rendering the impressions of an original drawing. Here, on the other hand, the picture is traced by means of cutting away regular white lines of varying thickness, so managed as to show that the artist has worked with the peculiarities of a wood-block constantly in view. It is among the modern engravers of France that this system has been adopted and pursued with the greatest measure of success. An artistic result always gains in effect of dignity and charm when a certain degree of scientific system and precision are seen to be employed in its production. No device, however cunning, will give a picture that peculiar fascination which comes from the perception of a style firmly held and deliberately put in practice; and it would be hard to match, even amongst the most perfect *fac-simile* engravings, the beauty of certain wood-blocks produced by some of the modern masters of the French school. As a favourable example of this method, I may take a reproduction of an early Florentine picture by Pannemaker, a copy of which I have brought with me to-night. Here it may be observed that the engraver has been, in the first place, careful of the qualities of the work that he has been called upon to translate. There is something in the simple and restrained style of the engraving which accords with the naive manner of the painter. Assuming that it is fair to attempt in black and white to make a version of a work in colour, it would be difficult to conceive of any better spirit in which to approach the task than Pannemaker has here displayed. In the next place it may be said that the engraving has a special charm, inasmuch as it appeals to us confessedly as a work executed on wood.

There is no merit in art in any concealment of the means by which a good effect is produced. If we are looking at steel engraving we like to feel that the engraver has made full use of all the delicate resources at his command, and that he has denied himself no refinement or subtlety of tone which the material places within his reach. In like manner a wood-block should give us a pleasurable sensation by reminding us of the peculiar advantages which it offers to the artist.

We like to feel not merely that the work is admirable in result, but that it has been a pleasure to the workman, and that he has enjoyed the task of accommodating his subject to the particular means at his disposal. We like to feel also, and we do feel always in the presence of any piece of masterly art, that the artist has had no unequal struggle with difficulties hard to overcome, but that he has been able, by his knowledge and practice in the craft, to bring a definite system to the treatment of the whole. In looking at a fresco, one element of fascination depends upon the fact that the texture of the wet plaster partly overpowers the surface of the colour and hinders any impression of vulgar illusion by reminding us that it is a picture painted on a wall. In the same way it is pleasant in a wood engraving to feel that it is a wood engraving, and that the lines are traced by one who is familiar with the processes, and who is not afraid to adapt his subject to his material. Nor is it to be said, because there is no attempt at any striking imitative effects in texture or colour, that the work is wanting in subtlety or skill. It is easy to perceive that these lines of varying thickness, through which the face of this maiden reveals itself, are cut by the hand of a master; every part of the picture has an equal degree of realism, an equal suggestion of colour, and yet there is over all a prevailing sense of style and system which gives the result its peculiar charm. It would be easy to multiply examples of the modern French school, which show to what a high point of development this scientific manner of wood-cutting has been carried, and we must acknowledge, when we look to the work of the past, that this mode of wood-cutting is a new discovery, and that it undoubtedly has its origin in the work of Bewick.

#### LABOURERS' DWELLINGS.

A PAPER was read at the Annual Conference of the Diocese of Nottingham by Sir Charles H. J. Anderson on "Labourers' Dwellings." The old thatched habitations, so picturesque and comfortable, were, he said, fast disappearing on account of straw becoming more valuable, and the destruction of the cultivation of reeds, which made such beautiful thatch, being effected by the draining of the fens where they once grew. In the place of these dwellings they found springing up the ugliest of brick buildings. Where they were even built with a view to ornament they found little to admire, except in those parts where stone was plentiful and good, where custom had produced, both in chimneys, gables, and mullioned window, what might be called a style of its own. He considered, however, that under any circumstances it was impossible to build a really picturesque cottage at a moderate price which could be adopted as a model. For country cottages he knew no better plan than those which might be found in reports of the Diocesan Architectural Society for 1861. These were twin cottages, and much like what they saw dotted about landowners' estates, and attached as adjuncts to the farm intended for the married labourer. The dimensions were as follows for each cottage, which had a porch and doors at each end to keep the families from interfering with each other:—Living-room, 14 feet by 12; scullery, 12 feet by 8, and a pantry; above stairs there should be three bedrooms, 12 feet by 19; 8 feet by 11; and 9 feet by 12. No cottage should have walls less than a brick and a half thick, and slate or some asphalte should be laid between the bricks a little above the ground to prevent the damp from rising. In these places there was an outer porch and an inner passage, allowing independent communication with the stairs, kitchen, scullery, and pantry, with a landing upstairs admitting separate entrances to the three bedrooms; and this was important for decency and convenience, which things the labourer cared little for. There would always be the lodger difficulty in connection with such buildings as he was speaking of, but he could not see how it could be done away with except by the introduction of stringent measures, which in these days would be termed tyrannical. In conclusion, the speaker referred to town houses, and said that more attention should be given to their construction, as the tendency was to build on "spec," and so disregard the most essential things for health and comfort. In conclusion he moved "That in the construction of labourers' dwellings, both in town and country, the health, morality, and comfort of the inmates should be the main object."

**Berkeley Castle.**—The fifteenth-century roof of the chapel of Berkeley Castle has been repaired under the direction of Messrs. Middleton & Son, architects, of Cheltenham. The ends of the oak beams supporting the roof having become decayed, the lead was stripped off the exterior, and strong beams, strengthened with boiler plates, fixed above the roof, and the roof itself suspended with wrought-iron stirrups.



## NOTES AND COMMENTS.

THE death is announced of M. HORSIN-DÉON, the French picture-restorer. During half-a-century an immense number of works of every epoch and school have passed through his hands. M. DÉON was entrusted with the formation or sale of several of the finest collections of old paintings. He was also a prolific writer on art topics, the most noteworthy of his contributions to literature being his sketches of the lives and works of French artists, and *A Treatise on the Preservation and Restoration of Paintings*, which is probably the best book on the subject.

LANCASHIRE is likely to supply profitable cases to Parliamentary counsel during the next session. The Manchester ship canal project will be supported by a fund of 100,000*l.*, and it may be assumed that at least an equal sum will be forthcoming on the part of those who will oppose the Bill. Then there is the new project for laying down over 130 miles of metal plateway for the conveyance of goods through the principal manufacturing districts of Lancashire, at a cost of about four and a half millions of money. Two main routes have been selected: one starting from the south end of Liverpool and running to Oldham *viâ* Warrington, touching the south side of Manchester, and taking in Ashton and Staley-bridge; the other route starts from the north end of Liverpool, touching St. Helens, Ashton-in-Makerfield, Bolton, Bury, Heywood, and Rochdale, and, like the other line, terminating in Oldham. There will also be subsidiary lines, leaving the main road at convenient points, and branching off to Burnley in one direction and Preston in another. It is proposed to use ordinary waggons or lorries, with wheels adapted to the gauge of the line. In fact, the plateway is a return to the primitive tramway of the North of England collieries. The promoters of the scheme believe that they will be able to monopolise the greater part of the goods traffic of the railways, owing to the simplicity of the arrangements, by means of which cotton can be conveyed directly from the ship's hold to the mill and *vice versa*. The preliminary expenses are estimated at 75,000*l.* The opposition in this case will be powerful, as the principal railway companies are concerned in it. If the two schemes come before Parliament, it is therefore not unlikely that half a million will be expended in the contest.

M. CHARLES BONNEGRÂCE, the French historical and portrait painter, has just died at Montmirail in his 60th year. He was formerly a pupil of Baron GROS, and was represented in nearly all the Salons since 1834. He obtained a third medal in 1839, a second in 1842, and was made a Knight of the Legion of Honour in 1867. Among his chief works are—*Christ au Tombeau*, *Le Baptême de Jésus-Christ par St. Jean*, *St. Laurent Martyr*, *Jésus Enfant parmi les Docteurs*, *Antiope*, *Daphnis et Chloé*, and *La Pudeur Vaincue par l'Amour*. He also executed a number of portraits, and had great success. The Paris Municipality entrusted him with the decoration of the Chapelle St.-Denis in the church of La Chapelle, and a large mural painting for the church of St.-Louis-en-l'Île.

M. CLESINGER, who has already executed two fine statues of the Generals KLEBER and MARCEAU for the great square in front of the Ecole Militaire, Paris, has received a further commission from the Government for one of CARNOT. The fourth statue will be of HOCHÉ. One will be placed at each corner of the square.

THE members of the National Society of Amalgamated Brass Workers have sent a circular to their employers in Birmingham asking for a new scale of payment to be adopted. It appears that it has been the custom in the brass trades for casters to receive one price for their work, which has been regulated by weight. For many years past different prices have been paid at various firms for the same class of work. Manufacturers who employ casters on light work have in some cases paid less than other firms who manufacture heavier goods. For the last twenty-five years patterns have also been considerably reduced in weight by the coring of work which was previously cast solid, also by the patterns being reduced to meet manufacturers in competing with each other, or to conform to the fashion in the more artistic branches of the trade. This lightening of patterns has diminished the wages of the

casters. The increased number of cores has also had the same effect. The following are the prices proposed by the society to be paid for the casting of chandelier, common gas, and general cock work:—Common fine, 22*s.* per cwt.; best common, 15*s.* per cwt., including pulley frames, ball joints, back plates, and glass holders when not done fine; common gas work, 10*s.* per cwt.; cock work, 10*s.* per cwt.; old moulds, 4*d.* each, and weight; pin pattern work, 4*d.* per lb.; false cored, 1*s.* per lb.; odd moulds, 4*d.* each; running down dust, 2*s.* 6*d.* per cwt. to be paid on the weight taken out; metal mixing, 1*s.* The 10 per cent. bonus to be paid on these prices and added the same way as at present.

A SMALL painting by M. MEISSONIER, called *La Polichinelle*, which had been for many years at Vienna, is about to return to France, having been purchased by a Parisian collector for 40,000 francs. The work measures about 6½ inches in height.

M. FALGUIÈRE has been elected Professor of Sculpture at the Ecole des Beaux-Arts. The other candidates proposed to the Minister by the Superior Council of Fine Arts were MM. AIMÉ, MILET, and MERCIÉ. M. FALGUIÈRE's group of *Triomphe de la Révolution*, on the top of the Arc de Triomphe in the Champs Elysées, is now being uncovered. The figure representing France, with the flag and altar of the Rights of Man, may already be seen above the scaffolding, while the groups Military Duty and Civic Duty will shortly be visible.

A CASE is now before the Scottish Law Courts in which important issues are involved. In 1877 Messrs. A. & T. ADAMS, of Callander, contracted to erect a bridge at Ayr for the sum of 13,000*l.*, according to plans which were prepared by Messrs. BLYTH & CUNNINGHAM, of Edinburgh. The work was completed in 1879. Soon afterwards the bridge was found to be insecure, and it was necessary to have other works carried out. The Road Trustees have accordingly taken an action against the engineers for neglect of duty in superintending the erection of the bridge, and against the contractors for breach of contract, and no less than 8,750*l.* damages are claimed. The contractors maintain that the bridge was stably and substantially built according to the plans and specifications furnished to them by the engineers. They further state that when the bridge was finished in 1879 it was examined by the Road Trustees, tested, inspected, then taken over, the whole price paid, and the contract terminated. The engineers state that they performed the whole of the duties incumbent upon them, and they deny that the bridge was in any way defectively constructed or insufficiently tested. At present the case is in a preliminary stage, as the statements of claim have not been fully specified.

THE Fine Art Industrial Exhibition which has been opened in Manchester is of great interest. There are, of course, no pictures, statues, engravings, drawings, and examples of ancient art that can equal those seen in the famous exhibition that was held in the city more than twenty years ago. But as showing the application of art to furniture and house fittings, it may safely be said no English exhibition has surpassed that in the St. James's Hall. In it the latest developments of industrial art are to be studied. Messrs. GILLOW show their competence to produce most excellent examples in the styles now in vogue—such as Flemish, Italian, Queen Anne, or "Adams." On no other occasion has such an opportunity been given to study the work of Messrs. MORRIS & Co. Several large specimens of the tapestries which have been woven at the Windsor Works have been lent, including those designed by Mr. HODGSON, R.A. No art exhibition would be complete without some of the pottery of Messrs. DOULTON, and at Manchester types are to be seen of the different kinds of their work, which may be said to constitute a new industry. The arrangements for the exhibition have been under the control of Mr. DARBISHIRE.

THE jury of the Rouen Fine Arts Exhibition have awarded a gold medal to Madame MURATON for two pictures of still life. This lady has already received medals at the great Exhibitions of Paris, Vienna, and London. M. LÉON GLAISE carried off the Government prize—a Sèvres vase. The Exhibition has been a marked success, and the exhibits and public attendance show a marked advance on former years.









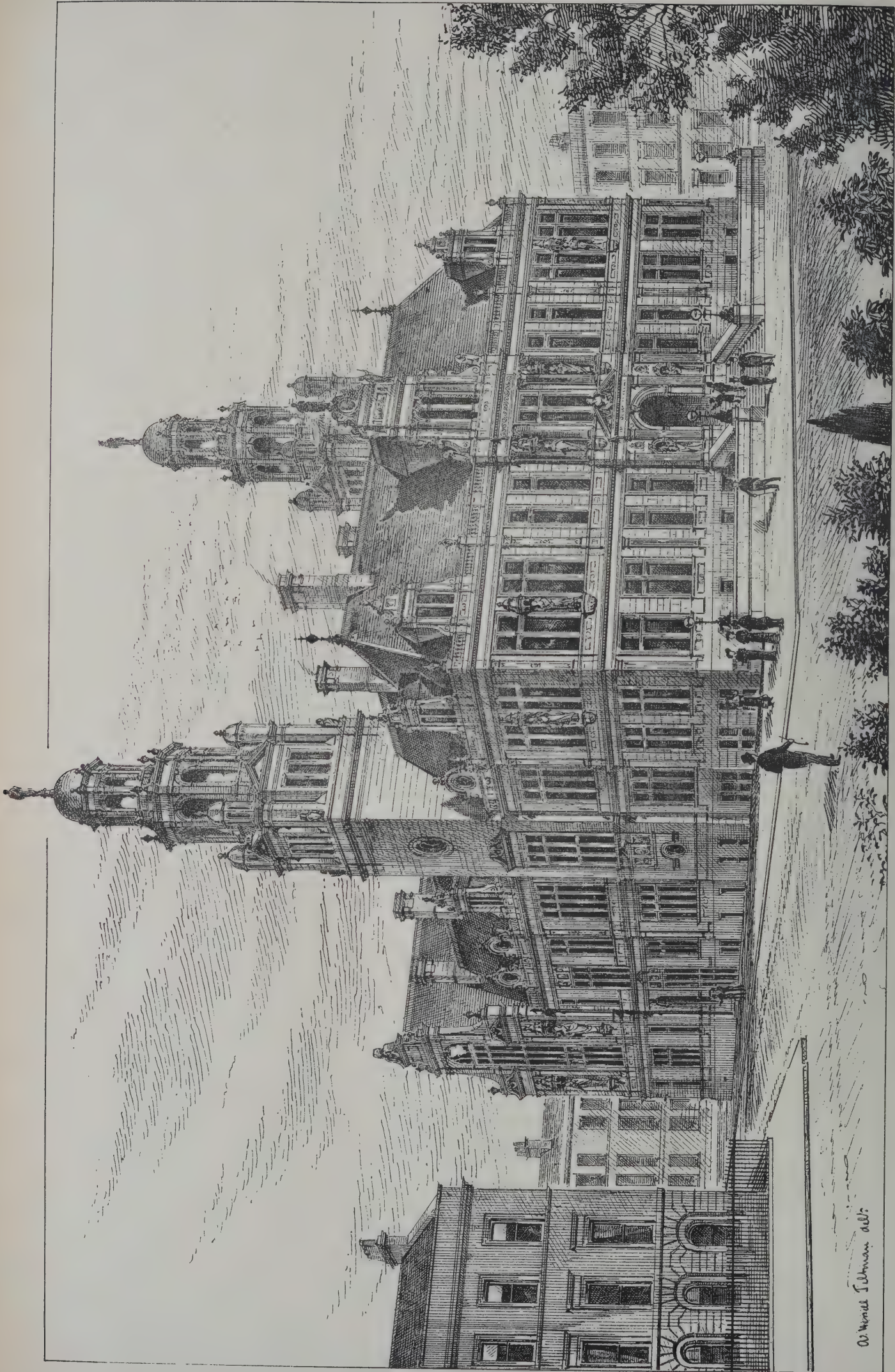
DESIGN FOR THE TOWN HALL, BIRKENHEAD.  
By JAMES N. CROFTS, ARCHT.

Engraved & Col. 22, Moles Lane, Cannon St. E.C.









DESIGN FOR THE TOWN HALL, BIRKENHEAD.  
BY A. HESSELL TILTMAN, A.R.I.B.A.

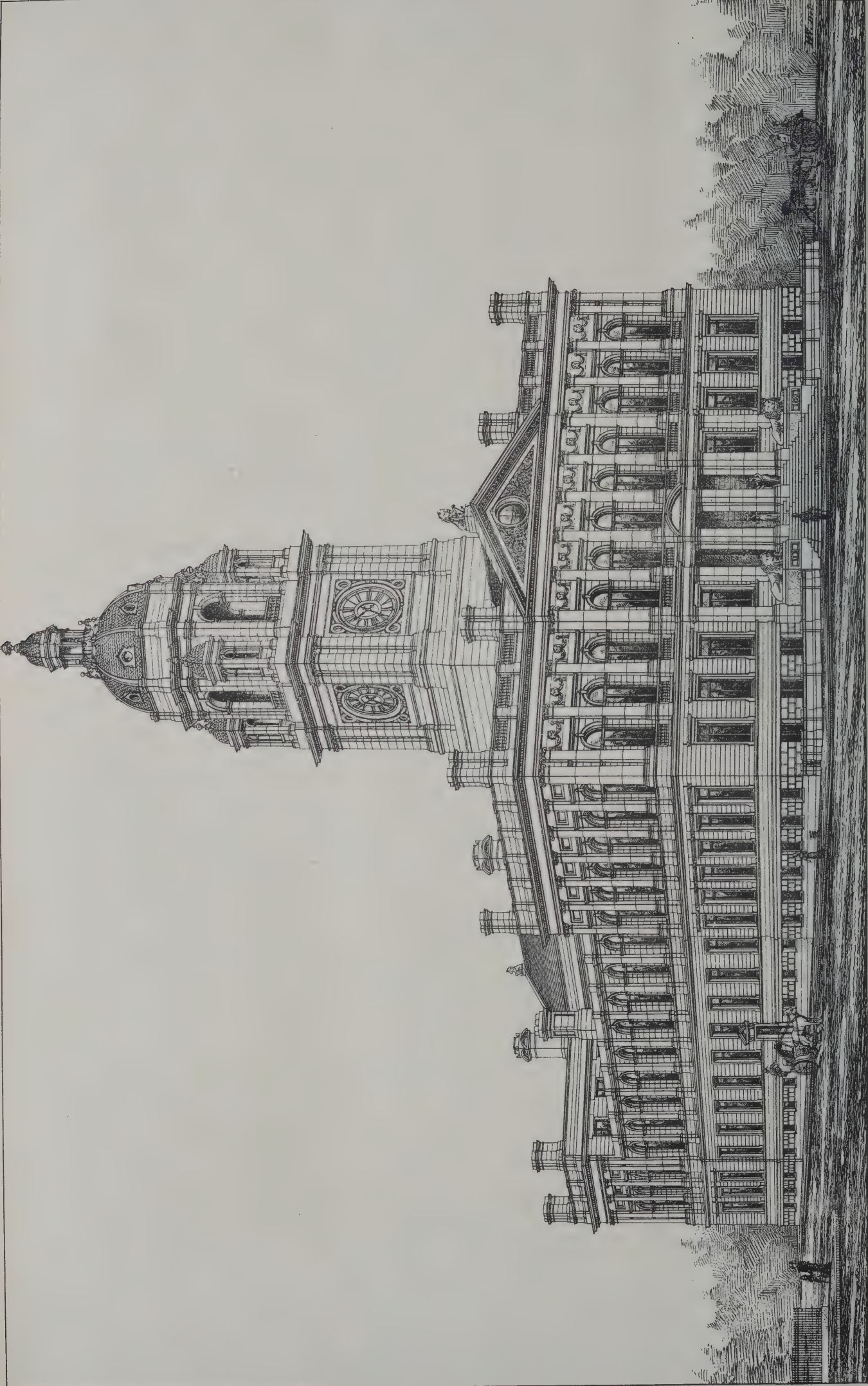
A. Hessel Tiltman del.

Printed & Co. 22, Abchurch Lane, Cannon St. E.C.





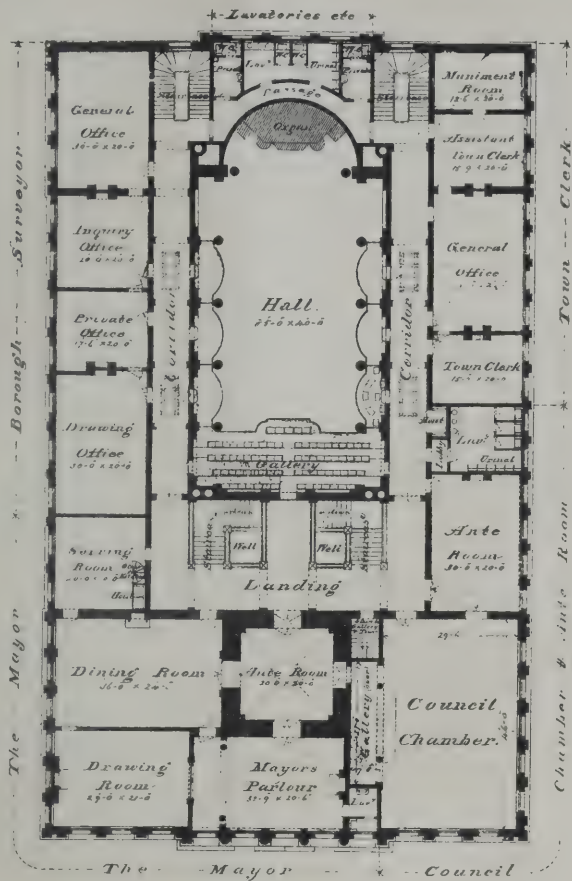




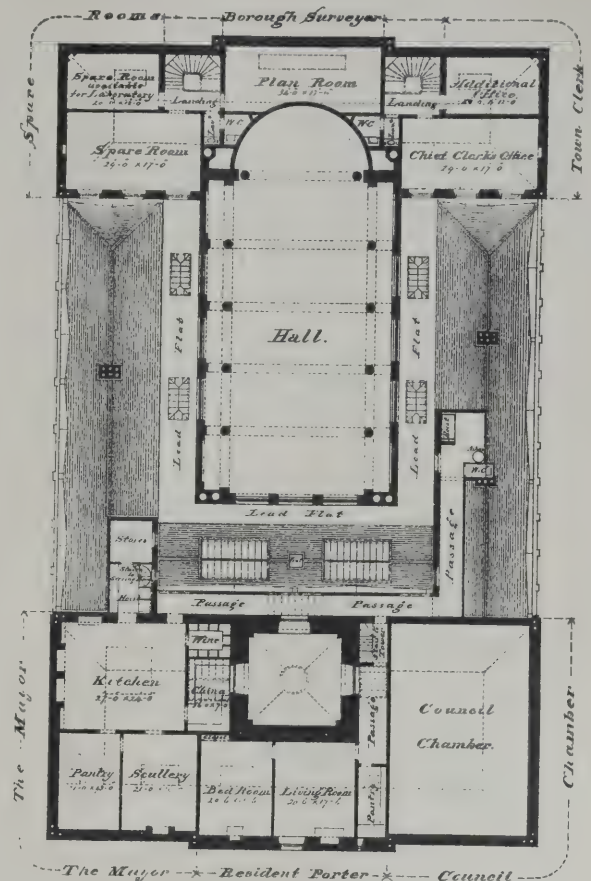
DESIGN FOR THE TOWN HALL, BIRKENHEAD.  
BY HENRY WALKER, F.R.I.B.A.

James & Co. 42, Abchurch Lane, London, E.C.

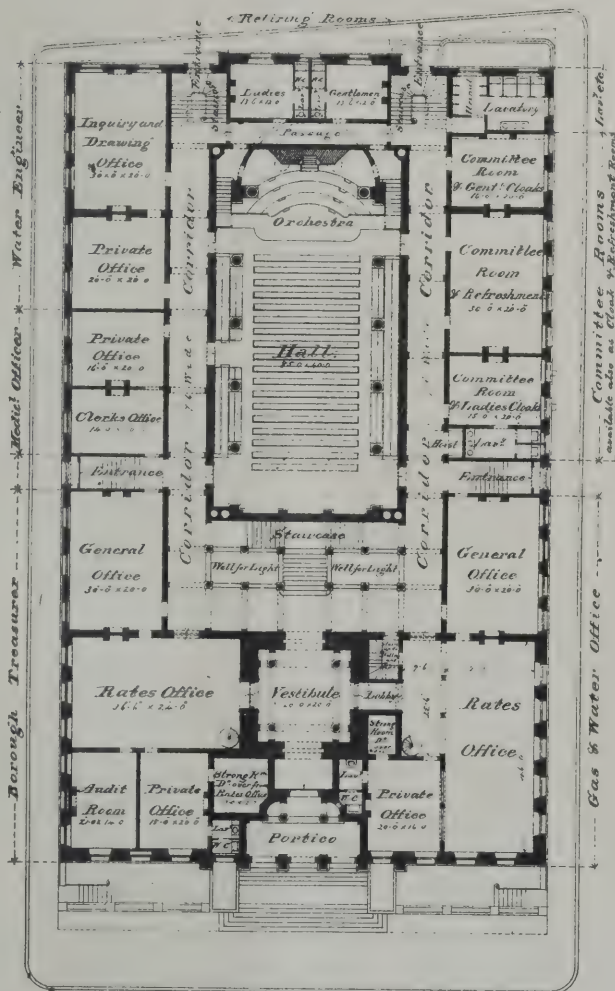




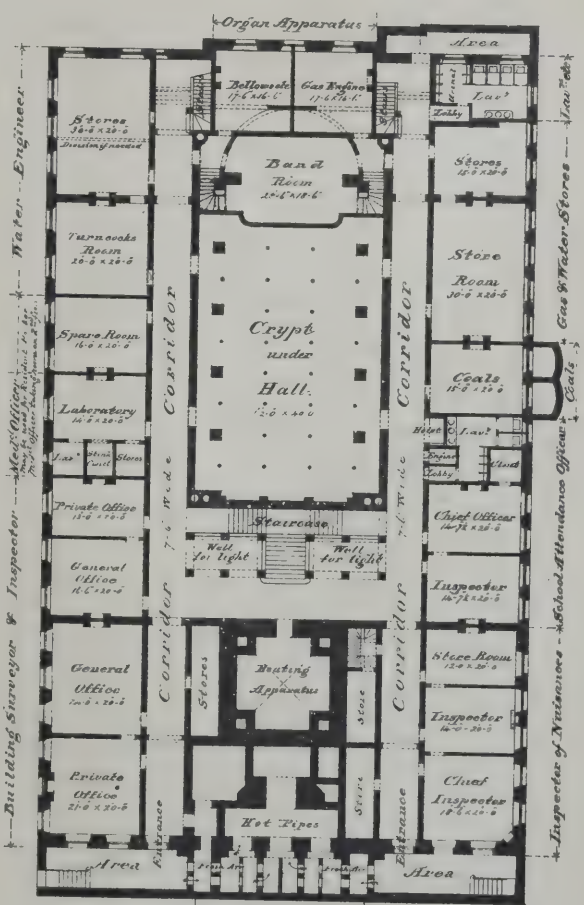
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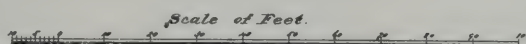
Second Floor Plan.



Principal Floor Plan



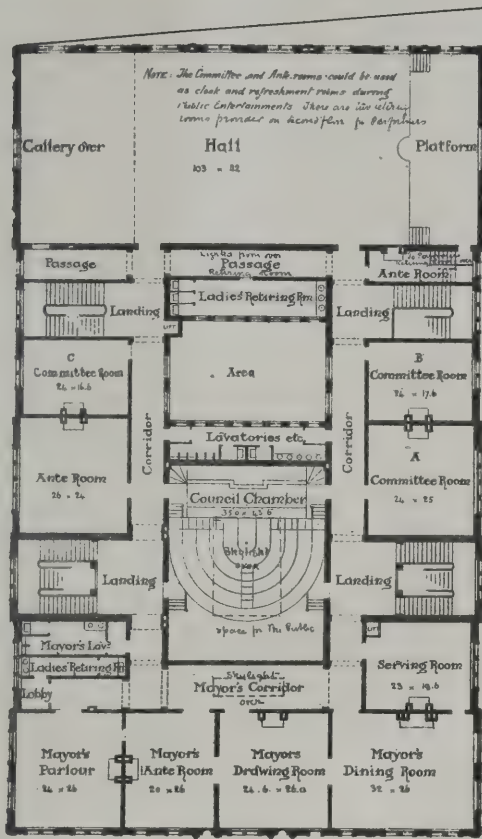
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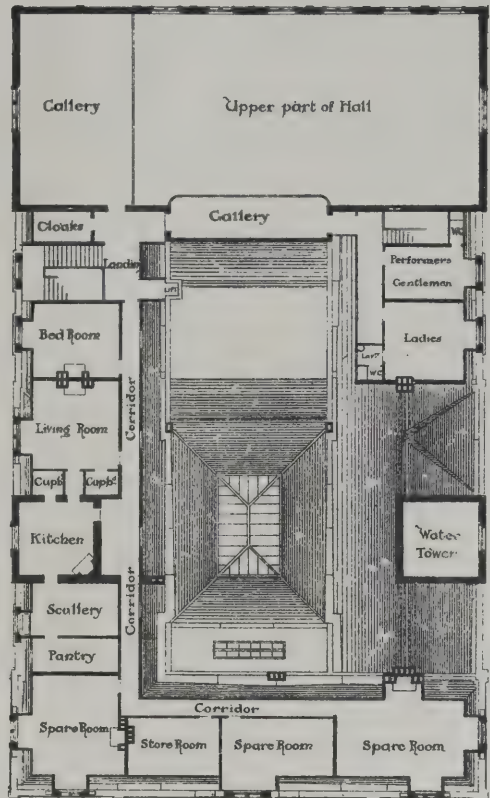




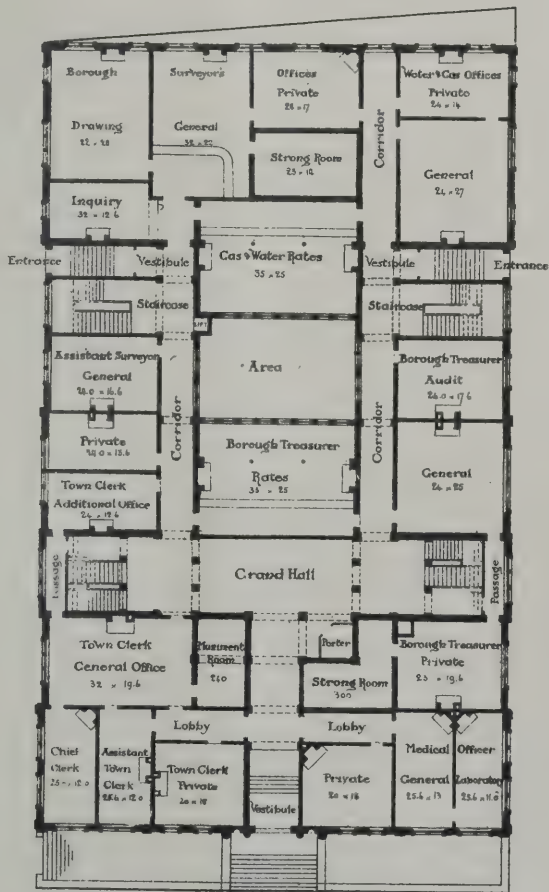




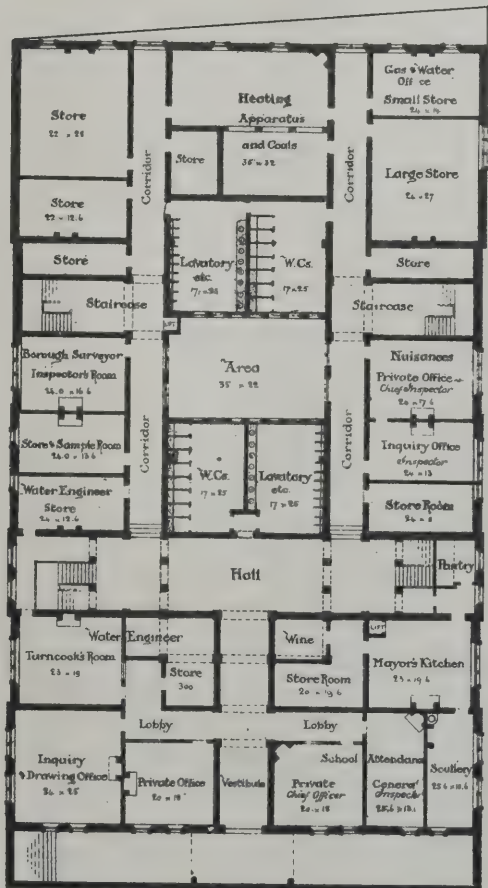
— First Floor —



—Second Floor—



—Principal Floor—

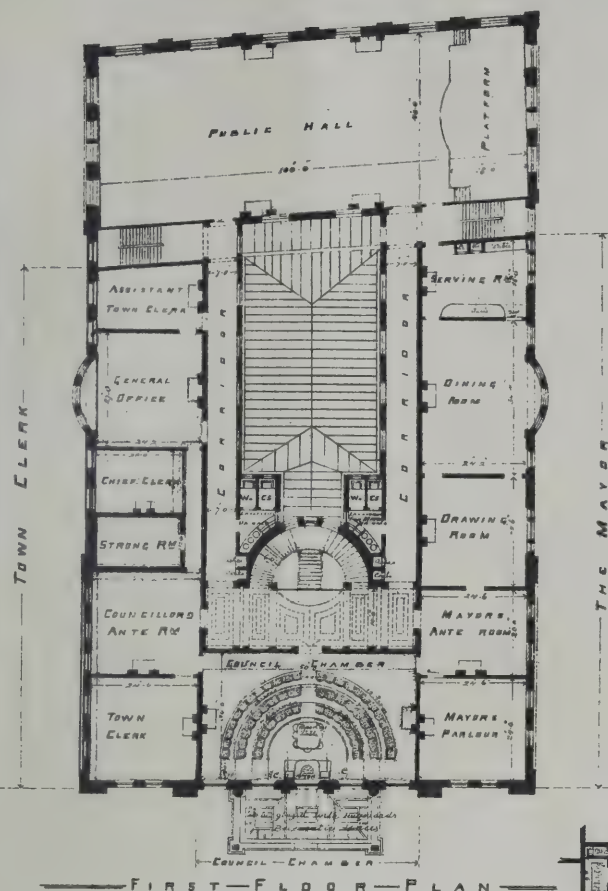


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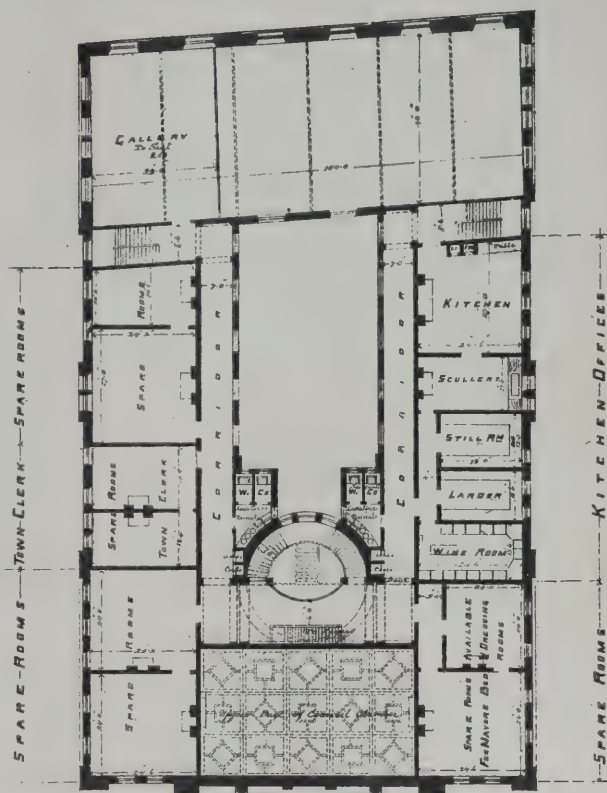




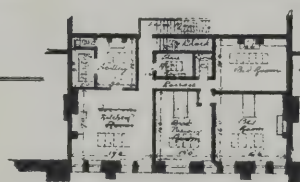




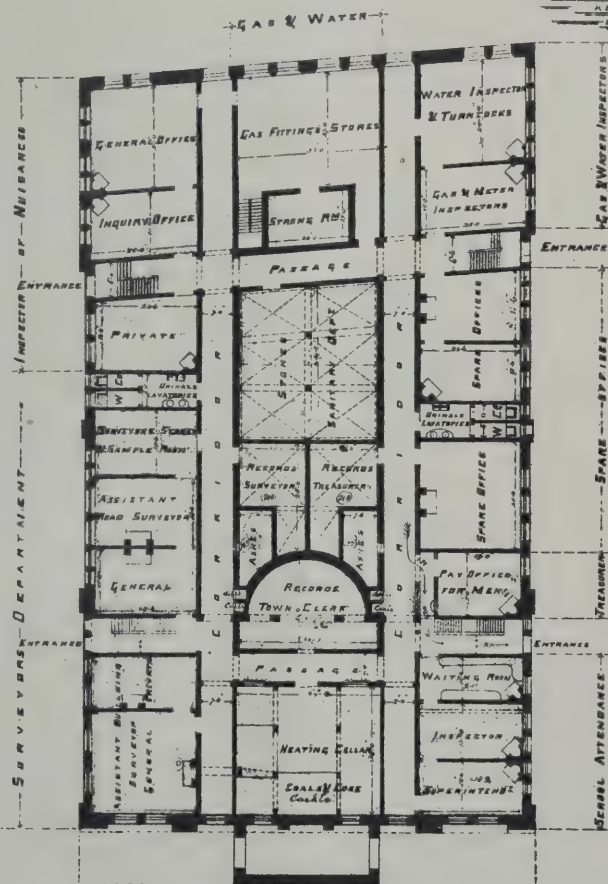
FIRST FLOOR PLAN



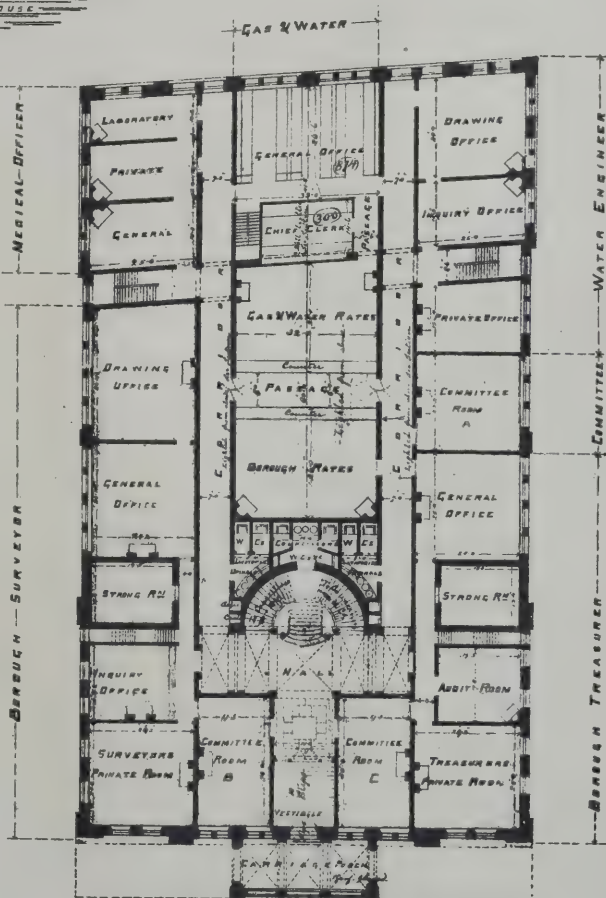
SECOND FLOOR PLAN



THIRD FLOOR PLAN  
KEEPERS HOUSE  
OVER A-A



BASEMENT PLAN



GROUND PLAN

SCALE OF FEET







## ILLUSTRATIONS.

DESIGNS FOR THE TOWN HALL, BIRKENHEAD.

WE publish this week three of the competitive designs for the proposed Birkenhead Town Hall.

One is by Mr. HENRY WALKER, F.R.I.B.A., of Leeds, and it was prepared after a personal examination of the site. The style adopted would be in accord with the surrounding buildings, and the author's aim was to secure a dignified appearance for the Town Hall from whatever point it was viewed. A tower was incorporated in the design, out of deference to the opinion of those who consider that a building of this class should have some distinct terminal feature. Besides being useful as a clock and bell tower, it would add to the appearance of the town when seen from the river.

The restricted nature of the site and the large amount of floor space needed for the great hall and the principal departments have increased the difficulties of the competitors; but the author endeavoured to secure simplicity and convenience in the arrangements. A grand double staircase was provided for access to council-chamber and mayor's reception-rooms, two other stairs being placed at the back of the building for approaching the offices. It will be seen that five public entrances were provided.

It was proposed to construct the whole of the substructure and the internal walls of stock-bricks, the outside walls being faced with stone from the Stourton quarries. There would be a base of Tranmere stone, and all flags, steps, and landings would be of hard Yorkshire stone. The columns in the hall would be of polished Hopton wood-stone or of iron cased with Scagliola marble. The staircases, corridors, passages, muniment-rooms, and strong-rooms were to be fireproof. It was intended to encase all the structural ironwork in plaster as a protection against fire. Provision would also be made for the effective treatment of the heating and ventilation arrangements. The roofs would be covered with green Westmoreland slates, and the dome of the tower with copper.

Upon cubing the design (allowing 2 feet 6 inches for foundations below basement floor and measuring to half-way up the roofs) it was found to contain 1,112,000 cubic feet, which, at 9d. per foot, amounts to 42,000l., which may be taken approximately as the cost of the building.

## II.

We also reproduce the perspective view and plans of the design submitted in the preliminary competition by Mr. A. H. TILTMAN, M.R.I.B.A., architect, of 7 John Street, Bedford Row, and Guildford. The plans sufficiently explain the arrangement and purpose of the several parts. The front of the building faces the Hamilton Square. The greatest difficulty the competitors had to contend with in this competition was the unusual one of cost, the sum being limited for the whole of the work to 42,000l. This design somewhat exceeded this amount. It was proposed to face the whole of the exterior in stone.

## III.

The particulars relating to the design which was submitted in competition by Mr. JAMES N. CROFTS, architect, 5 Harrington Street, Liverpool, are as follows:—

The council-chamber, being the most important room, is placed in the front on the first floor, and is loftier than the adjoining apartments. A gallery is also arranged for the public. The mayor's apartments are *en suite* with this on the south side, and the town clerk occupies the whole of the north side on this floor.

There is a large public hall, 100 feet by 40 feet, at the back on this floor, capable of holding nearly 1,000 persons, and is arranged near service, so that it can be used as a banqueting-room on extra occasions, and is also arranged so that it can be emptied in a few minutes.

The surveyor's offices are on the ground-floor on one side, and treasurer's department on the other, with the rates offices in the centre, under quadrangle, thereby ensuring good light and economy of space. The gas and water offices are at back. The committee-rooms are placed easy of access on ground-floor, and the medical officer and water engineer are also on this floor. The school inspector, remainder of surveyor's department, inspector of nuisances, gas and water inspectors, and some spare offices, are placed in the basement: this floor however, being only some 3 or 4 feet below ground, with windows above, is thoroughly well lighted. The centre of

this floor, under quadrangle, is vaulted, and is made for stores and records. There is a gas-fitting store at back connected with the gas office above.

The second floor is devoted to spare rooms and the kitchen department. The keeper's house is placed at top, over council-chamber.

All the corridors are well lighted, and there is abundance of egress and ingress to all parts of the building. The strong rooms, staircases, and corridors are all fireproof.

The dome has a large exhaust at top to be utilised for ventilating the building, inlets by air tubes, heating by hot water and open fires.

The design is made to harmonise with the houses in Hamilton Square. The sculpture groups represent the sciences, arts, commerce, and kindred subjects. The stone would be from Cefn, North Wales, with granite for the entrances and plinth. The woodwork would be chiefly in oak, and the dome constructed of iron covered with zinc. The architect's estimate for the whole, including dome and carriage porch, &c., complete, was 44,300l., or at the rate of 9d. per cubic foot all through.

The author believes that the arrangements shown in his design would have been in accordance with the views of the officials, and would have met with the approval of the Corporation.

## SCOTTISH ARCHÆOLOGY.

THE subject of the second of the Rhind lectures on "Scotland in Pagan Times: the Bronze and Stone Ages," which are now in course of delivery in Edinburgh, was "Burial-places which were marked by Circles of Standing Stones." Dr. Anderson said that in 1860 a group was discovered at Manchrie Moor in Arran, containing urns and implements or ornaments of bronze and flint among the fragments of human bones. In these burials the phenomena were of the same special character as those described in the first lecture. They were associated with implements of bronze or urns decorated with that ornamentation of straight zigzag lines which was characteristic of the age of bronze. But they differed from those previously described in respect that they were marked by the presence of a ring of standing stones encompassing the area in which the interments had been made. The objects associated with the burials in the character of grave goods were small pins of bronze, portions of thin bronze blades, chips of flint, bracers of polished stone, and the head of a perforated stone hammer or battle-axe. These were not associated with all the burials; but urns, or fragments of urns, with forms and ornamentation characteristic of interments of the bronze age, were found in all the sites. From the frequency with which these burial circles were found to contain a plurality of interments, it was obvious that they were not the monuments of single individuals, but family or tribal burying-grounds. From the fact that they contained interments burnt and unburnt, it was obvious that they were in use when both these customs were practised, while the occurrence of bronze in association with the burnt interments assigned them to the age of bronze. In all these instances the circular stone-setting, whatever might be the precise form which it assumed, had been found to be the external sign by which the burial ground was distinguished from the surrounding area. Like the cairn, it was the visible mark of the spot of earth to which the remains of the dead had been consigned, though of course it was impossible to say, and it was not necessary that it should be affirmed, that in every stone circle the evidences of interment would be found. The colossal size of their pillar stones, the magnitude of the area enclosed, the care and labour expended entrenching and fencing it, were features which gave to these singular constructions a peculiarly impressive character. This impressiveness was specially characteristic of such a circle as that of Stennis, in Orkney, which encloses an area of two and a half acres. Dr. Anderson noticed the standing stones of Callernish, in Lewis, a type of structure which was associated with a chambered cairn. The cairn appeared in a subordinate character, for it was plainly the great stone setting and not the small cairn which was the principal object. The cairn had given way to the circle, and the circle had risen to the dignity of the principal member of the composite structure. It thus became clear that the circular stone setting, which first appeared as an adjunct to the stone-age cairns, acquired its dignity and importance through the degradation of the cairn structure which it encircled, and came at last to stand alone as the characteristic mark of bronze-age burial. No other conclusion, the lecturer thought, could be come to than that these stone circles were the customary enclosures of bronze-age burying places. It was not possible, in the present state of our knowledge, to proceed further than this with certainty. But, looking at the obvious fact that most of the relics which had been described were objects constructed for definite purposes in every-day life, and that they had all been devoted to the grave by the feeling which was of old



termed "pious," it seemed impossible to doubt that it was culture and that it was civilisation that were thus manifested by unfamiliar phenomena. Such devotion in honour of the dead implied an attitude of mind which was inconceivable apart from the existence of culture. They saw here a moral feeling prevailing over the greed of gold, placing the most massive and costly ornaments on the slab that covered the grave chest, and leaving them there undisturbed with but a few inches of earth to protect them. They perceived that the cairn, the circle of erect stones, the broad, deep trench marking off the grave-ground, were costly memorials, whether they were the products of filial piety and family affection, or of public sympathy and appreciation of worth. In some cases the magnitude of the work, and in others the hugeness of the masses of the individual stones of which they were composed, implied more than mere costliness, and indicated the consciousness of power and the ability to overcome the forces of nature, while it also gave evidence of the existence of organisation and co-operation which were the necessary concomitants of civilisation. And when to this indirect testimony they added the direct evidence of technical skill and artistic taste supplied by the presence of the various objects of use or ornament, in stone and bone, bronze and gold, amber and jet, which accompanied the remains interred in these constructions, they might well ask to what they would attribute these various manifestations if it was not culture in the individual that produced the skill and developed the taste, and if it was not civilisation in the society in which he lived and moved that furnished the means and the leisure that make culture possible.

Dr. Anderson in his third lecture treated of "The Culture and Cultivation of the Bronze Age." As there was, he said, no example of a dwelling or a stronghold which could be assigned to the bronze age in Scotland, the materials remaining from which to draw conclusions regarding its culture and civilisation consisted chiefly of the arms, implements, and ornaments of the people which have been preserved in the soil, though not associated with burials. These remains were found in hoards or deposits of greater or less numbers of articles, often of different varieties of form of character, and in single examples found casually in the soil. The first of the principal deposits which had been found in Scotland the lecturer spoke of was a large portion of a hoard of bronze objects which was presented to the Museum of the Society of Antiquaries in 1781, and which had been dredged up from the bottom of Duddingston Loch, Edinburgh. Sir Alexander Dick, who had established a system of marl dredging, in describing the circumstances of the "find," said that his men when dredging in deeper places than usual brought up a very weighty bag, which, on examination, proved to be a "heap of swords, spears, and other lumps of brass." The spear-heads, the lecturer stated, were mostly large leaf-shaped, with a cylindrical socket for the shaft prolonged into a tapering midrib extending to the point of the blade. The fragments of the swords showed that they had also leaf-shaped blades, with a flat handle-plate pierced by rivets. When the Queen's Drive, Edinburgh, was being formed in 1846, two swords of bronze similar to those found in the loch were found on the side of the hill overlooking the loch. They were both entire, and showed the perfect form of the swords found in the loch. One measured 26½ inches in length, and the other 24¾ inches. The form was peculiar, very different from anything that is seen in the iron age. The implements were short, and unfurnished with a guard; they were neither inelegant nor unpurpose-like, but, on the contrary, remarkably graceful in form and fitness of purpose. The blade was leaf-shaped, and widest at about two-thirds of its length from the handle-plate. Such a form of sword was not Roman, and it had not been in use since the period of the Roman invasion—the swords used at that time being of iron, the bronze swords, therefore, belonging to an earlier period, of which there was no historic record. He then referred to a number of bronze weapons and ornaments which were found in 1869 in excavations that were being carried on in Grosvenor Crescent. After minutely describing the formation of the swords, &c., he went on to speak of bronze implements and weapons, &c., found at Gogar, Brechin, Skye, Gospartrie (Fife), Achtertyre (Elgin), Killin, Highfield (Dingwall), Kingarth (Bute), Corsbie Moss (Berwickshire), Glenbervie, Shuna, Beith, and Yetholm. The total number of bronze objects discovered in different parts of Scotland was estimated at 61 bronze swords, 4 scabbard tips, 39 spear-heads, 3 broad, heavy, halbard-like blades; 4 shields, representing 111 weapons or implements of war; 31 socketed axe-heads, 8 plain circular rings, 3 penannular armlets, 4 pins, 2 annular discs, 1 gouge, 1 caldron, and 1 golden ornament, representing 51 articles of common use or ornament. The characteristics of the hoards in which these objects were found were (1) that they were not associated with human sepulture, and (2) that they all contained warlike weapons. He then proceeded to describe a series of deposits which contained no warlike weapons found at Premnay (Aberdeenshire), Bell's Mills (Water of Leith, Edinburgh), Poolewe (Ross-shire), Colleonard (Banffshire), and Tonderghie (Wigtownshire). The objects of the articles were the same as the warlike weapons. After referring to hoards of massive ornaments of gold found in various parts of the country, including Stirlingshire, Arran, Islay (where 36 gold armlets were found), Argyle, Lanark, Galloway,

Dumfriesshire, Slateford, near Edinburgh, &c., Dr. Anderson said that the examples he had given would suffice to show the prevalence of the use of gold in Scotland at a period when iron and silver did not appear among the industrial products of the people, and that bronze was the only metal employed in the fabrication of their cutting-tools and weapons. The prevalent use of gold in the age of bronze being a prominent and characteristic phenomenon, the question arose—How did the bronze-age people of Scotland become possessed of such a supply of what was now the representative of material wealth? There was no direct answer to such a question. The fact which was of importance was that they had the gold, and had it apparently in abundance. One thing he was sure of was that, from whatever source their supply of gold was obtained, it could not be obtained without its relative equivalent in labour or produce being given in return. If they imported these metals (copper, tin, and gold), the fact that a traffic so complex and costly was maintained and provided for implied the existence of the conditions of culture and systems of social and commercial and political organisation which could not be held to indicate a low condition of civilisation.

In summing up the characteristics of the peculiar phase of culture and civilisation as it was found manifesting itself in Scotland at this time, the lecturer said it was apparent the objects were manufactured within the country—first, because in many cases they exhibited special varieties of form peculiar to Scotland, and, second, because the moulds themselves were found in the soil in which the objects were found. Some of the works of which he had spoken were very fine, and the hammer-made articles had never been equalled in beautiful workmanship in more modern times. The people of that age also used gold in the mounting of their weapons, and most lavishly in personal adornment. Although nothing was known of their household life and manners, yet there was evidence of an indirect nature to indicate that they could not have been wholly destitute of the comforts and conveniences of life. The people were known now to the people of the present day, not from the circumstances in which they maintained themselves in life, but from the circumstances which were the direct result of their attitude of mind towards their dead. If life with them was a struggle for existence, they looked in vain for its memorials; but there was no wide district of country in which the memorials of their dead were not prominent, picturesque, and familiar features. In this, as in the preparation of the funeral pile, the fabrication of the finely ornamented urns, and the costly dedication of articles of use or adornment, freely renounced by the survivors, and set apart from the inheritance of the living as grave goods for the dead, was realised the intensity of their devotion to filial memories and family ties, to hereditary honour and ancestral tradition. The realisation of this was only attained by patient investigation, and after a long course of sustained and laborious effort to gather and preserve the mutilated relics and memorials of the piety and industry, the culture and cultivation of the bronze-age ancestors. The iron-shod progress of the present day tramples out the foot-marks of those who travelled in days gone past—their monuments were demolished, their graves ploughed, their bones scattered, liberty for their bones to lie undisturbed in the soil that was theirs before it belonged to the present generation, and which belongs to the people of the present day as it belonged to them, was refused them. This was done, and was called civilisation, and done also by the present age with the less compunction because they were called savages.

The remarkable horned cairns of Caithness formed the subject of Dr. Anderson's fourth lecture. On the crest of an eminence overlooking the south end of Yarhouse Loch were two of great magnitude, and within a short distance from each other—not circular but elongated in form, lying along the crest of the hill from east to west, diminishing in breadth and height from east to west, and with curved, horn-like projections at both ends of their structure. The larger of these cairns when excavated was found to be 240 feet long; and the breadth at the spring of the horn at the eastern end 66 feet, and at the western end 36 feet. The horns expanded in their curvature so as to make the line across their tops at the eastern end 92 feet and at the western end 53 feet. The extreme height of the cairn at the east end did not exceed 12 feet, and it sloped gradually to less than 5 feet at the west end. The removal of the loose stones from the upper part of the east or high end of the cairn disclosed a chamber with a passage leading into it. The chamber to which the passage gave access was excessively small as compared with the gigantic size of the cairn—being scarcely 12 feet in length and about 6 feet broad. The side walls were still entire to a height of 7 feet. The substance of the floor was a compacted mass, about 5 inches thick, of earthy clay plentifully intermixed with ashes, charcoal of wood, and calcined bones, in a condition of extreme comminution. Although the amount of bone ash which entered into the composition of this mass was very large, no single fragment of bone was discovered exceeding an inch in length; but the few fragments that did afford definite indications were unmistakably human in character. About a dozen chips of flint and two fragments of pottery—of a well-made, hard-baked, thin, black paste—were all the manufactured relics obtained. It was, in fact, the non-success of the search for relics that



suggested the direction of the investigation to other results. The best defined of the two projecting horns in front of the chamber was selected for examination. It was then discovered that this great cairn was a cairn only in external appearance, and for the same reason that the broch is a cairn, *i.e.* because it is a ruin. Originally, then, this great cairn, which by the dilapidation of ages had assumed the appearance of an oblong mass of loose stones, had been built upon a definite ground plan—240 feet long, 92 feet broad at one end, and 53 at the other—with a double wall defining its external outlines. It had been a construction in an architectural sense, with an external elevation, of which portions remained to the height of 4 feet. It was also a structure in the architectural sense by having an internal elevation—an interior chamber, covered by a roof partitioned off into compartments, and provided with accesses by a lintelled passage and an external doorway. It was not built with mortar or cement of any kind. Its stones were unsquared, and bore no mark of any tool. Its roof was partly flat and partly arched by the overlapping of the stones. In these respects its constructional features were not different from those of the dry-built structures of the early Christian period, or of the iron age of Pagan times. But its singularity of form, and the absolute individuality of its architectural conception, precluded the possibility of assigning to it any relationship with them. In fact they had hitherto met with no form of structure to which it was comparable. About 200 yards distant from this cairn, another closely resembling it was examined. Its extreme length was 190 feet, its greatest breadth 45 feet, and its least breadth 25 feet. From the inspection made, it also appeared to be a cairn through dilapidation, but not in reality. This was the most significant fact disclosed by these investigations. Its significance was partially seen when they remembered that all the sepulchres of the bronze and iron ages with which they had become familiar were absolutely structureless—were heaps of stones and earth piled over the cists or graves. Even the stone circles or boundary rings of standing stones, though possessing some features of construction, had none of the essential characteristics of a structure like this, with exterior and interior elevations, external walls and internal chambers, rough floored, and partitioned and furnished with doorways and passages. As yet they had met with nothing in the contents of these examples of this superior type of sepulchral structure which enabled them to associate the type with any one of the three stages of culture and civilisation characterised as the ages of iron, bronze, and stone. As the result of excavations of other and similar Caithness cairns, Dr. Anderson pointed out that they differed widely from the structureless cairns of the bronze age, and that their typical characteristics were:—(1) The presence of a definite external form which was structural, and (2) the presence of an interior chamber accessible by a passage and doorway. It was also apparent that in this small area of investigation there were two well-marked varieties of this typical form. One of these resembled the bronze age cairns in the circularity of its external form, while differing from them in its internal construction. The other differed from the bronze age cairns both in external configuration and internal construction. The inference was that the circular form passed on into the bronze age, while the other form did not; and that the form which was most unlike the bronze age form was the earlier of the two. But in their essential characteristics they were easily recognisable as outlying examples of a general type whose area was not confined to Scotland, although it was not known to extend beyond the bounds of Britain. A considerable number of examples had been more or less completely investigated in England, chiefly in Yorkshire, Wiltshire, and Gloucestershire. One of these, most recently excavated, measured 149 feet in length, 76 feet wide at the one end, 41 feet at the other, and 10 feet high. It was slightly horned at the one end, but it shared the English peculiarity of having no projecting horn at the narrow end. Entering from one side of the structure was a passage leading into the chamber, in which the remains of many burials were found. In singular agreement with the character of the Caithness burials, no implements, or ornaments, or pottery were found, with the single exception of a well-formed, leaf-shaped arrow-head of flint, which was found in the passage leading to the chamber. Other and similar examples were found in the same district. In view of the excessively pronounced peculiarities of this character, there was no escape from the inference that they were all the work of one race of men. In the words of the late Professor Rolleston, the peculiarities of a horned cairn were such that it was impossible to imagine that they did not indicate to us that one race of men, and one only, must have combined them as they are combined. And their geographical distribution showed, with equal conclusiveness, that of whatever stock that race might have been, they were a homogeneous people, spread over the whole area of Britain.

**Kelsale.**—The parish church of Kelsale has been restored from the plans of Mr. Norman Shaw. The work has been done in sections, and the last section of the work has now been completed. The contractors for the work were Messrs. Ludkin & Son, Benham, the architect being Mr. E. Prior.

## FRENCH ART SCHOOLS.

THE annual meeting of the Burslem School of Art was held on the 19th inst., when Professor Roscoe, a member of the Commission on Technical Instruction, distributed the prizes. After describing the progress of science teaching, he continued:—If in evening science instruction we in England excel, it is in art evening classes that we find the French pre-eminent. It is often said that the French have a natural taste for art, and that it is hopeless for England to compete with her in this department of industry. This I do not believe. England has produced artists of every grade and kind equal to any which France can boast, and therefore the capability of the Englishman to receive and to excel in art work is, I believe, certain. But he needs training, and that he has not yet had, either in pure or in applied art, to anything approaching the extent to which it is supplied to the French student. A well-known French artist has expressed his opinion respecting the highest walks of English art teaching, and with some degree of truth, that "your artists are not teachers, and your teachers are not artists"; and so we have not got the idea of the necessity for art teaching into our marrow as the French have, and our art teaching—whether from faults of the system or otherwise I am not competent to judge—does not do for the nation and the industries dependent upon art what the French and German schools do for their art industries. In this respect, I take it, we have much to learn and much to do before we are up to the level of Continental nations. To take one single example. When the Commissioners were in Paris, your excellent member and my valued friend Mr. Woodall, together with Mr. Swire Smith and myself, visited many of the night art schools. In one of these schools of design, situated in the Tenth Arrondissement, we found no less than 300 adult pupils, all of whom, you will please to remember, had been hard at work at their various trades for twelve hours before they entered the school, for there is no Fifty-six Hours Bill in Paris. There we saw engravers, stuff-designers, stone-masons, carpenters, decorators, and other tradesmen, to the number of forty or fifty, all drawing from the living model. In another room was a large mechanical drawing-class, where I saw an ordinary stonemason making a scale drawing of a skew bridge—a task which, I will undertake to say, very few working masons in England could do.

In a third room was a class of thirty men engaged in modelling in clay from a classic figure, and three or four other rooms were crammed full of artisans working hard at their art studies, and these same men came every night in the week. Then when I tell you that there are no less than thirty or forty such schools in Paris, all filled with anxious and diligent students, and when you compare this with our too sparsely attended schools of design, you will see that after all teaching has something to do with the prominence into which French taste and French fashion has forced itself throughout the markets of the world. But it may be replied that this demand for high art teaching, even amongst the artisan class, and the want of such a demand in England, proves that the French have a natural aptitude which fails in the Englishmen. Again, I feel certain that this is not so. The demand for further art training amongst the blouses is great because they have been taught whilst boys in school what drawing is, and they understand how important a part it plays in their future careers. The whole matter is summed up in two words. Our system, or I want of system, of teaching drawing in primary schools is execrably bad; the French system is excellently good. In the one case the boys learn nothing except to detest the whole business; in the other, children soon find that they benefit from the teaching. They then take an intelligent interest in the subject, and this expands into a decided taste, which grows with their growth and strengthens with their strength. In my opinion no subject whatever can be taught to young children which can exceed, if even it can compare, in importance with drawing. But then, of course, it must be properly taught. If properly taught it not only trains the hand and eye, but may be made the most excellent means of exercising the child's observing faculties, of teaching it accuracy and patience, and of rewarding it when the difficulties are successfully surmounted in a tangible definite form by the drawing which it takes home. Moreover, this teaching of drawing is the proper commencement of technical instruction for every trade and for every class of industry, and for every position in those trades and industries. From highest to lowest the power of representing correctly on paper what has to be worked out in reality, is a power which cannot be too highly prized, and yet it is one which, even amongst what are termed our educated classes, is rare enough. Now I maintain that our old-fashioned system of drawing from the flat leads to none of the above advantages; on the other hand, the time of the children is wasted, and not only so, but either their interest is never awakened or, what is worse, they are disgusted with the subject. The working of the continental system has exactly the opposite effect. In place of drawing pictures of old tubs and besoms, broken down cottages or equally valueless objects, the French boy begins almost at once to draw from the round—a simple cast of a leaf, for example. He then has some tool or simple piece of machinery placed on his desk. This he has first to sketch, then he accurately measures all the parts, and, noting



these, he afterwards has to construct a sectional drawing to scale of the object. Problems of constantly increasing complexity are thus placed before him, and the objects which he has to draw are such as are of everyday use, and of practical value, and the result is that the little French or German boy out of the street is able to draw, and draw accurately in a way which is absolutely astounding to an Englishman conversant only with the work of the ordinary primary English school. I am perfectly well aware that we have in England schools where drawing is well taught, as well perhaps as anywhere else. But the exception only proves the rule, and I am convinced that if the Education Department and the school boards, and the public generally, were to insist upon and carry out through the length and breadth of the country the foundation of a rational system of drawing-teaching, such as that I have briefly described, and such as is to be seen at work in almost every elementary school on the Continent, more would thus be done towards the solution of the question of our technical instruction than many might at first sight suppose.

### DECORATIVE ART.

THE first of a course of six lectures on "Decorative Art, Ornament, and Design," was delivered by Mr. J. H. Chamberlain, at the Midland Institute, Birmingham, on Tuesday evening. The notion of speaking upon the whole subject of decoration in six lectures was, he said, almost as absurd as a proposal made to him by a person whom he once met to teach him the French language in two lessons. With the permission, therefore, of his hearers, he would call his course of lectures simply an introduction to the study of decorative art, ornament, and design. The study of art might be either very wide or very narrow, and in this case the narrow way was not the safe one. They might, if they liked, study art in a narrow manner, and learn something about it. They might get hold of what was called the practical side of the question; they might learn maxims and get receipts; they might get to understand some of the outward characteristics of style, and attain a good deal of what was commonly called "art knowledge," so as to practise for themselves, doubtless with a considerable degree of success; but if they had no more knowledge than that, he ventured to say that they would be, as far as regarded art itself, entirely uneducated persons, and their practice would be merely empiricism, or what the world called quackery, and they would not have any real insight into the business to which they affected to belong. To understand any single phase of art required very prolonged and very wide study. Even if they said they would confine themselves to one particular style, they would find that it was impossible to understand that style without going back for hundreds, perhaps thousands, of years. They would find themselves obliged to look at what the rest of the nations of the world were doing at the same time, they must understand kindred styles, and they must go on even to some examination of the subsequent career of the particular style they were studying. This was true if they wanted simply to learn such a comparatively easy matter as the history of the style; but if they wanted to get at what was, really, after all, the only kind of art knowledge that was thoroughly worth knowing, they needed to understand not only the outward characteristics of the style, but its inner life—not only its history, but the reasons of its course—and so they would find their study gradually widening until the task became a gigantic one. In fact, none of them need be ashamed to acknowledge the truth, that however much they might work at that ever-widening subject, they would be ignorant of a very large portion of it. Art having to do with the mind, with the heart and soul, being guided by feeling and passion, being the product of joy and hope and love, and a great many other mental matters, it was quite impossible to understand the art of any past era and of any past nation unless they knew more than its outward signs, and unless they were able to understand something of that nation's joy. Owing to the ignorance which prevailed there were many persons who held that in the differences of opinion which prevailed as regarded art it was "no use disputing about taste," that taste had no special value, and that in art there was no standard of right or wrong. He hoped that those to whom he was speaking would not take that as the correct verdict, and it would be his effort to show in these lectures that there was some attainable standard of right and wrong in art. So little was the true nature of art understood by most people that they would find solemn treatises and solemn people ready to say that art was simply a sign of national decay; that it had never flourished in any age when that age had been at its best; that it was the offspring of luxury and effeminacy; a toy and plaything to please the idle moments of voluptuaries and fools. Such false ideas would be dispelled if people knew what art really was, and if they examined it by its only true key. Art was only another history of man's humanity. It was a history of man's wants and of his efforts to satisfy them—a history of man's soul, written in a language which was, perhaps, difficult to read and easy to misinterpret, but still the most permanent language the world had known. Had the true nature of art been known it would, the lecturer pointed out, have saved them from many mis-

takes, and especially from futile endeavours to restore or bring back some art that had perished, or that which had outlived its uses. Such knowledge would have shown them that if they must revive things they could only revive them, as Shakespere said, "with a difference"; and even revival of that kind was only possible where something at least of the same state of civilisation and the same state of society as that which made the art remained until the present hour. We were rough enough and rude enough in some things; but our roughness and rudeness was not like that which found expression in the Gothic art. They asked a stonemason to make them a Gothic quatrefoil, and he forthwith took his compass and struck four accurate circles. If they ordered him to do it with the irregularity of the antique, he would not do so; or, if he attempted it, he would give them a regularity of irregularity. It was impossible to revive archaic art, or to imitate that of another nation in which the conditions of civilisation were different. The lecturer illustrated this from the experience of the last few years in the imitation of Japanese art, and from the attempted revivals of the Greek, Roman, and Egyptian, Gothic, and other ancient forms of art. It was a curious thing that we should be always digging up the dead, and reviving ghosts. We went through some sort of art incantation, expecting to see life, and all that we achieved was to call up some miserable shade of it. There was, he thought, still hope for us if we would only try to learn what art was. We had been collecting stores of material and widening our idea of art. We saw that it had not been confined to one or two kingdoms only, but that it had been the heritage of all kinds and conditions of men—that there had been no nation which had not had some kind of art of its own by which it was able to communicate its feelings and thoughts to its fellows, and to hand down the record to the races succeeding. Mr. Chamberlain concluded by showing how art was the result of man's faculty of admiration, influenced by his physical wants, and urged his hearers to the cultivation of that faculty, stating that our future in art would be determined, first, by the warmth, truth, and sincerity of our admiration or the reverse; and in the second place by our skill in making plain the nature of that admiration, and revealing it to our fellow-men.

### LIVERPOOL ARCHITECTURAL SOCIETY.

AN address was delivered at the opening meeting of the session of the Liverpool Architectural Society by the president, Mr. William Parslow, F.R.I.B.A.

He said it was pleasing to observe the number of buildings in progress which gave evidence of skill and development in artistic power among the architects of Liverpool. A distinguished Town Councillor once exclaimed, "Architects in Liverpool! Why there are no architects in Liverpool." There was sufficient in those days to rebut such a doubt, but now there is a great deal more. They were pleased to have buildings by the privileged architects of London and elsewhere, but buildings by their townsmen show that the necessity does not exist to go out of Liverpool for architects. The cases where an outside architect has been appointed without competition, however, indicate that the Town Councillor's notion still prevails. Mr. Parslow said that as architects they could hardly condemn the Government for declining to erect a new post office in Liverpool. The position for a half-century of an important centre like a post office gives value to the property around, and many properties are acquired with the knowledge of the advantages consequent upon the position of such a building, the removal of which would be an injury to them. Owing to a similar cause, he knew of a case where property in one place sank in value 75 per cent., while sites, as in Victoria Street, went up 75 per cent. Recently a property for which a gentleman declined to give 400l. five years ago has been sold for over 30,000l., this increase in value being due to improvements in the vicinity. If they turned from the consideration of large structures to ordinary building, they saw a curious prospect before them. A contractor said recently that nobody will now build for investment, and to obtain reasonable interest on buildings is out of the question. It was well known that in the suburbs of Liverpool houses were offered to occupiers free for many months and afterwards at a nominal rent. Building societies lend money too freely to speculating builders. Then the mortgages are compelled to seize the properties and let them for a nominal sum in order to bring a return; and so general in all parts of the country has this experience become that all good property duly paid for in suburban districts has had to come down in rental value to compete with this class. The original purpose of the building societies was to enable prudent people to acquire their own houses at a moderate cost. Now they are employed for a different end, and in consequence building societies are succumbing to evils of their own creation. One society recently wrote off 8,000l. at a sweep in order to be rid of responsibilities.

They must all be pleased by seeing the action of the Government in controlling the manufacture of white lead in order to diminish the dangers to the workmen; the manufacture of oxide of zinc, which produces no such effects, might become a substitute. The



trouble that exists in grinding zinc when oxidised might, by due attention, be diminished. At present we keep to the old practice of using white lead. People are obstinately conservative in this particular who would abjure the name in politics. If we turn to the zinc in preference to lead, this article would doubtless soon compete favourably in price. Certainly it retains a purer whiteness than lead. Oxide of zinc is now used more in naval architecture than in buildings, and it is said to prove much more enduring when used for the painting of bulwarks, exposed to alternations of wet and dry, than oxide of lead.

Mr. Parslow afterwards referred to the expedients for the abatement of smoke in towns, the settlement of light and air cases, professional evidence in law courts, the Liverpool water supply, open spaces in towns, the St. George's Hall sculpture competition, the Mersey Tunnel, the Channel Tunnel, &c., and concluded with some advice to students.

### THE BIRMINGHAM CORPORATION AND ELECTRIC LIGHTING.

A REPORT has been prepared by the Gas Committee of the Birmingham Town Council, who have been engaged in considering whether the electric lighting of the town should be undertaken by the Council, or whether consent should be given to one or more of the applications for power of which notice has been given by electric lighting companies. It is recommended that the latter course should be adopted. The report explains that under the Electric Lighting Act certain powers are reserved to a local authority, when a licence has been granted a private company, to supply the light. It is supposed, for example, that the Board of Trade has the power to make provision in the licence or order that the local authority may control the breaking up of streets, may make contracts with an electric lighting company for the performance of this work, and themselves undertake the control and breaking up of the streets. No loss would therefore arise to the town if the Corporation declined to have a monopoly of the lighting. As regards the profits which might accrue to the town from such a monopoly, the committee say there are no reliable data on which an estimate can be formed of the prospect of a profitable supply of electricity being undertaken. So far as it is known there has been no instance of a profit having been derived from such a supply, but it has been replied that this is a presumption only, as no electric company has yet separated in its accounts the profit and loss on manufacture and supply. It must not, however, be lost sight of that some at least of the scientific witnesses examined before the Parliamentary Committee on the Electric Lighting Bill believed that such a profit is attainable; while others, and those perhaps with the best practical acquaintance with the subject, were more cautious, and stated that this had to be proved by experiment on a sufficient scale. One of them, Mr. Crompton, stated that no remunerative return was to be expected during the first seven years at least of the experiment. Mr. Gainsford, a member of the Town Council of Sheffield, who has been using electric lighting in collieries with which he is connected, is reported to have said in a recent debate in the Council of that town, that his experience had been that electricity cannot be provided at the price of gas, even when the motive power is provided free. The committee have calculated the cost of lighting the Market Hall Ward, containing about 1,000 yards square. There are in the ward 3,570 consumers, who are using at a moderate computation from 100,000 to 120,000 lights. The length of mains in the ward is nineteen and a half miles, and their value 13,500*l*. The capital account for gas, including mains and services, is 170,000*l*. It may, however, be noted that the cost of new gasworks, specially erected for lighting such an area, including distributive plant and meters, ought not now to exceed 100,000*l*. The cost of electric plant, dynamo, conductors, and services for 100,000 lights is estimated at 423,500*l*, exclusive of buildings, lands, &c. The minimum amount of capital that will be required must therefore considerably exceed 4*l*. per lamp. The only power to be obtained under the Electric Lighting Act is for the supply of electricity, and the Act expressly prohibits any arrangement by which profit on any particular form of lamp can be made an integral part of the system of supply. It follows, therefore, that the question of profit to be made by undertakers, whether local authorities or electric-lighting companies, must be considered as solely appertaining to the supply. It cannot be doubted that when conductors have been laid in any area, each of the owners of lamps and apparatus which are protected by patent will urge the employment of a particular lamp, and that while a profit on the manufacture and supply of lamps would thus be secured to them, the undertakers would be left with what has been shown to be an inevitably costly portion of the business.

The committee do not think it can be said that electricity is at present a public necessity. Dr. Siemens has said that electricity is the light of luxury, and that gas is, and will be, the poor man's friend. The committee, not differing with Dr. Siemens, quote his authority in support of their opinion, and are unable, so far as regards this reason, to recommend the expenditure of any portion of the corporate funds in an experiment for the advantage of a

portion only of the community. They do not believe that the rate-payers will be in any way prejudiced by the establishment of one or more companies in limited areas of supply. They are of opinion that the competition with gas at local prices will impose a sufficient limit to the price of electricity, that it will be possible to make due provision under such a concession for the retention by the Council of full control over the public streets, and to secure immediate progress with the installation, and that it will not be difficult to arrange that the concession shall be made for a moderate term.

The result of an undertaking to supply electricity would almost certainly impose an immediate burden on the ratepayers, with the ultimate prospect of a considerable loss. It is known that the principal difficulties of the proposed system lie in the distribution of electricity. Apart from cost, the difficulties of the generation of electricity and the construction of lamps may be said to have been overcome. A local authority undertaking the supply of electricity under the most favourable circumstances would have on its hands the costly and difficult part of the supply. It would, however, be serving the interests of companies whose profits are made by royalties on or the manufacture of dynamos, plant, and lamps, who would be able to attribute all the imperfections and failures of the system to the source of supply, and to whose interest it would be to foster a continual agitation for cheaper electricity. The committee believe that no sufficient reason can be shown to induce the Corporation to enter on a work which cannot fail to bring it anxieties, difficulties, and arduous labours, without the recompense of contributing to the welfare of the community as a whole, and which would involve financial responsibilities, with the uncertainty of adequate, if any, return. If, on the other hand, the companies are allowed to take the management of the supply, they will undertake also the responsibilities and difficulties appertaining to it. At the end of the term which is agreed upon, or which Parliament determines, as sufficient compensation to the company, the Corporation will have the same opportunity, but on more favourable terms, of acquiring the property, and will, if it has become profitable, have the same inducement in the saving of interest on capital employed as it had when it purchased the gas undertaking.

### LEWES PRIORY.

A MEETING of the Sussex Archaeological Society was held on the 19th inst. at Lewes. The remains of the Castle were visited. Afterwards Mr. Somers Clarke gave an explanation of the recent excavations at the Priory. He said he would presume that they were acquainted with the general history of the foundation of the Priory, and should only mention a few dates in reference to it. They all knew that the reception accorded to William de Warrenne and his wife Gundrada at the great monastery of Cluny, in Burgundy, decided them to place the religious house they proposed to form at Lewes under the Cluniac Order. They therefore arranged with Hugh, Abbot of Cluny, to send over three or four monks to England, and Lanzo and three others came over in 1077. They might presume that before the arrival of the monks the plan of the monastery had been laid out and the works commenced. It did not appear that William de Warrenne intended to found a house of great size. The somewhat modest dimensions of the church, as well as the small number of monks asked for, led to that conclusion. He wished to explain in passing what he meant by the modest dimensions of the church. They were all acquainted with the cathedral at Chichester, and knew it to be one of the smallest English cathedrals. The dimensions of this church are in almost every respect less than those of Chichester Cathedral, certainly the original dimensions were rather smaller, and therefore he was justified in saying that the scheme was not a very great one. The consecration took place between 1091 and 1097. He hoped they would be able to get at the date more accurately after further investigation. Mr. Clarke here proceeded to explain the plan of the building as he thought it existed up to the time of the first dedication, pointing out that the church was only 54 feet in extreme width, internal measure, and remarked that for this fact, together with all other information concerning the church, they were indebted to Mr. Parsons' plan. Allowing for the substantial piers always used by the Norman architects, he said it was evident the scheme of the building must have been a small one. He pointed out on the plan the position of the high altar, choir, cloister, dormitory, refectory, and where the kitchen and abbot's house probably stood, remarking that of the kitchen and abbot's house, there are no remains. He had no doubt the remains of an infirmary would be found, as this was a very important part of a monastic establishment, the aged monks being permitted relaxation from the somewhat severe discipline of the rules of the order. In the time of the third Earl de Warrenne, a second dedication took place, probably between 1136 and 1147. He supposed that the new church had a double transept, and that the accommodation of the brethren was very much increased. A comparison with other monastic buildings made the conclusion inevitable that the new church had double transepts, and the fact that the mother church at Cluny had them was in favour of that supposition. That building was of surpassing magnitude, and was



reconstructed in 1089. As the church in Lewes was begun about 1077, it must have been laid out earlier, and it was not, therefore, likely that it would have been affected by the plan of what was proposed to be done at Cluny. The great monastery at Cluny was already of long standing, and had become very wealthy. Its church had double aisles, double transepts, and besides these a building at the west end practically as large as many a large church. They had no account of the number of monks in residence at the Priory, but they must presume that the whole brotherhood had increased since the first foundation, and that they would require a larger dormitory. He could hardly account for the dormitory being carried so far south, and concluded that it must also have been re-erected. It was exceedingly probable that when they built the chapter-house, they increased the dormitory with it. He had abstracted several dates from a book that he had seen in the British Museum, which went to show that in 1218 the great infirmary was built, and two houses of the infirmary erected in 1219. In 1229 the first mass was celebrated in the new Lady Chapel, and a bequest of two hundred marks was made in 1268 towards completing the towers of the front of the church. In 1243 it is stated that on the anniversary day Earl Warrenne laid the foundation of "the new work at our church," but they were not quite sure about the application of this entry to Lewes. Before the suppression the Priory must have presented a magnificent appearance, more particularly as there were such a great number of persons of distinction buried in it. Mr. Clarke then referred to the work that had been done recently, and said that they had chiefly been engaged in clearing the place and taking much of the earth away from the dormitory, revealing the great enlargement that was made after the first foundation. They had not, however, up to the present time found any objects that seemed to be of great importance. A circular staircase was found in the north-east angle of the refectory similar to the one known before to exist.

Mr. Somers Clarke then referred to the courtesy of the London and Brighton Railway Company. A representative had been sent by the engineer to inform him of their willingness to place a fence round a portion of the ruins abutting upon the line, and to remove certain obstructions, so that visitors to the grounds might have free access to every part of the existing remains of the Priory. Mr. Clarke said he had to thank the members of the Sussex Archaeological Society for the help some of them had given him, but, in reply to some 600 notices sent out, he had only received seventeen contributions. He wished especially to thank Mr. Evelyn Blaker, who had not only given a handsome subscription, but had announced that he would pay any balance there might be on the wrong side, and he must also express his indebtedness to Mr. St. John Hope for having so opportunely come to his assistance, and superintended the excavations. He could only regret that that gentleman was not present to describe the ruins.

### THE SITE OF TROY.

A GENERAL meeting of the Society for the Promotion of Hellenic Studies was held on the 19th inst., when Professor Jebb read some notes on the site of Troy, based on a recent visit to the Troad in company with Professor W. W. Goodwin, Mr. Frank Calvert, Mr. J. T. Clarke, and a Prussian architect. The result of his observations had been to convince Professor Jebb in the first place that the extant remains did not warrant Dr. Schliemann's well-known theory of seven successive cities on the same site. These five observers could find no such number of distinct layers of *débris*. The remains of building, whether of brick or stone, were not, in their opinion, of such a character as to justify any positive assumption of period; and though, undoubtedly, brick buildings existed showing traces of fire, these were not sufficient in quantity to prove the existence of a city built entirely of brick, but only the co-existence of brick and stone. The evidence of pottery, on which Dr. Schliemann and others had laid stress, was not, Professor Jebb contended, by any means conclusive as to any period or succession of periods, so good an authority as M. Dumont having stated his conviction that it was impossible to say exactly to which period each kind of pottery belonged. On the general question of the comparative claims of Hissarlik, Bunarbashi, and other places in the Troad to be regarded as the site of Homer's Troy, Professor Jebb maintained that no one site in the Troad fulfilled all the conditions, and that it was unreasonable to suppose that Homer intended to draw an accurate picture of any given city. It was far more likely that he composed his Troy out of several places that were before his mind. Thus, though the main events of the poem might most appropriately be grouped around such a site as Hissarlik, it was impossible that so slight an eminence should be described as "windy" or "craggy," epithets which, however, were strictly applicable to Bunarbashi. In short, Professor Jebb regarded the search for the Troy of the "Iliad" as hopeless, because unreasonable. After some remarks upon the Greek tradition as to the site of Troy, Professor Jebb concluded by expressing his sense of the great services Dr. Schliemann has rendered to

archæology by his discoveries, adding that in his opinion the gratitude of scholars for these discoveries was better shown by a careful examination, and, if necessary, refutation, than by a hasty and ill-considered acceptance, of the theories Dr. Schliemann had based upon them. Mr. L. P. Farnell read a paper on the Gigantomachia as treated in the altar frieze lately discovered at Pergamon, and now at Berlin. After dealing with its relation to previous literature and tradition, the writer proceeded to discuss in detail the relation which the work bore to other known treatments of the same subject.

### ANCIENT CONVEYANCING.

THE opening lecture of the Law Classes of the Edinburgh University was delivered on Tuesday by Professor Tytler. The subject of the lecture was "A Sketch of the Early History of Conveyancing." Conveyancing, he said, was coeval with the idea of property itself. Even in the rudest form of civilisation there existed certain forms and ceremonies by which all transactions or covenants dealing with property were ratified. The possession of movables was *prima facie* evidence that they were the property of the possessor; but actual occupancy of land was not necessarily a test of property. After a reference to the early methods of land transfer in the East mentioned in the Bible, both before and after writing was made use of in the transaction, two Persian instances recently discovered were also given, relating to the reigns of Nebuchadnezzar and Darius. In these cases the deeds were recorded on terra-cotta plates, one side of which had a carefully-executed plan of the land sold, and the names of the adjoining proprietors. Conveyancing in the early days of Rome was next referred to, certain recognised forms and ceremonies being then deemed of more importance for the transfer than any writing, which was only the evidence of their due performance. At an early period Rome had a public register for such deeds. In many of these transactions they could trace the germs of their own form. The Royal Charters of Rome were the models for subsequent documents of the same description in this country, some of which were almost in the same words. The ceremony of transmission of land under the feudal system was, he showed, copied in some of its particulars from the Romans. The barbarians who invaded the Empire disposed of the land they conquered according to the fundamental principle of the feudal system, which was a disposition of the soil by the prince or leader of free grants to his followers, under the condition and obligation that they, for their part, should render to him military service. These grants were at first only for a time or for life, and it was not until the time of Charlemagne that they became, properly speaking, hereditary. Speaking of early methods in this country, he said the Britons never took kindly to the Roman system, and that was superseded when the Saxon invasion took place. A reference to the early Saxon deeds as being brief and simple was by the students greeted with loud applause. In England the form of charter which was used until a few years ago was fixed about the time of Edward. The early Scotch charters were very much the same as those of England; but latterly they differed very much. How that came about he could not there examine; but it was likely to be attributed to their legal institutions having been founded so much more on the Roman law than those of England—a circumstance which might be explained by their early and close connection with France.

### THE THAMES COMMUNICATION QUESTION.

THE Committee of the Metropolitan Board of Works, to whom the schemes of Sir J. W. Bazalgette for new means of communication between the north and south sides of the Thames had been referred, have arrived at the conclusion that immediate steps should be taken to furnish at least three additional means of communication between the two sides of the river at the points indicated by the engineer upon his plans—viz., the Tower, Shadwell, and Blackwall. They are not prepared, however, to express any opinion as to the form or mode of communication to be provided. This, they urge, is a question which will require much more consideration, and upon which it is not necessary for the Board to come to a decision at present. What has first to be determined upon is whether additional means of communication shall be provided, having regard both to the public needs and to the financial considerations involved. It is unnecessary to point out that the cost of the undertakings, whatever form they may assume, will be very great, and the Board, before determining on them, will doubtless wish to ascertain whether anything can be done to reduce the prospective charge on the rates which will follow on their being carried out. The indirect taxation which now exists in the shape of the coal and wine duties at once suggests itself as the most simple and equitable method of affording the relief required. The duties are now leviable until July 1889. Representations have from time to time been made to the Government in recent years as to the expediency of extending the time during which the duties are



authorised to be levied, and the answer of the Government has hitherto been to the effect that it would be well to wait until nearer the time when the duties will expire before asking the Legislature to prolong them. This time is approaching, and the Committee of the Metropolitan Board of Works are of opinion that next session will not be too early for Parliament to be asked to prolong the time within which the duties may be levied. The Committee recommend that the Government be informed that in the Board's opinion three additional means of communication are required between the two sides of the Thames, and that the Government be asked to introduce into Parliament in the next session a Bill to prolong the period for levying the coal and wine duties.

## LEGAL.

### Hanley County Court.

**KELLY v. EARL GRANVILLE.—EMPLOYERS' LIABILITY ACT.**

Judgment has been given by Mr. Holroyd, County Court Judge, in an action brought under the Employers' Liability Act by the plaintiff, as the widow of Thomas Kelly, who was killed whilst working upon the premises of the defendant. It was alleged that the death resulted from a defect in the condition of the plant used in the business of the defendant, "such defect being the deficiency of ropes and pulleys or other proper appliances for safely lowering the beams of timber of an engine-house"; secondly, from the negligence of Wallace, a person in the service of the defendant, who had superintendence entrusted to him; and thirdly, from the negligence of Wallace, to whose orders or directions the deceased was bound to conform and did conform, the injury having resulted from his having so conformed. At the time of the accident the deceased and some other workmen were engaged in demolishing an engine-house at the Shelton Bar Ironworks. The building was composed of three floors. The whole of the operations were under the direction of William Rees; Wallace was the foreman bricklayer under Rees. He was a working foreman, and worked himself. On the ground-floor, where the deceased was removing tiles from a box, was a crossbeam. The mode of taking down the timbers of the roof was by sawing through the beams and letting them fall to the floor below. Under ordinary circumstances there was no danger in this operation, for it was not disputed that the floor was sufficient to resist the fall of the beams. In the floor, however, was a hole. By some unfortunate mischance one of the beams, in falling from above, instead of resting on the floor, went through the hole, and, striking on the crossbeam, which was about six feet from the ground-floor, bounded off and struck Kelly, inflicting injuries which resulted in his death.

In giving judgment Mr. Holroyd said—The first head of claim mentioned in the particulars cannot in my opinion be sustained, for it alleges that there was "defect in the condition of the plant." I do not think that the word "defect," as used in the Act, means that the best method has not been used for attaining the desired object; but that there was some imperfection or fault existing in the plant or machinery itself. For instance, to take the present case, if ropes and pulleys which were rotten had been employed for lowering the beams, it perhaps might be said that the plant was defective, but here what the plaintiff really complains of is that an improper mode was used in the lowering of the timber from the roof—that is, by letting it fall; and it seems to me that an improper scheme or mode of operation does not fall within the first subsection. The second head complains of the negligence of Wallace, a person in the service of the defendant who has superintendence entrusted to him. The plaintiff cannot maintain the cause of action here relied upon, for on turning to the interpretation clause (section 8) it will be found that the expression "person who has superintendence entrusted to him" means one who is not ordinarily employed in manual labour; and here the evidence is that Wallace was a bricklayer, although a foreman, and worked himself. The third head is that the death resulted from the negligence of Wallace, to whose orders the deceased was bound to conform and did conform. This head of claim requires greater consideration than the two former, for the deceased was bound to obey the orders of Wallace, and Wallace sent him to work at the spot where he met his death. He therefore did conform to the directions of Wallace, and from so doing he met with the injuries which resulted in his death. The question then resolves itself into this—Was there any negligence on the part of Wallace? Or, in other words, was the place where Kelly was working unsafe? For it must be taken that if the place was unsafe, Wallace must have been aware of the nature of the operations and of the danger if any existed. The alleged negligence of Wallace consisted in this—that he sent the deceased to unload the box of tiles, although he knew that to work on the ground floor was unsafe whilst beams of timber were allowed to fall from the roof. But it must be recollected that the beams were intended to fall upon the floor of an upper storey. If they had so fallen they would have rested there and have been lowered afterwards; and in that event no injury could have befallen any person on the ground-floor, but unfortunately there was the hole, and through this hole a beam unexpectedly fell, which, striking upon a cross-beam and bounding off, struck Kelly, ultimately causing his death.

It seems to me that this result could not have been anticipated by any human foresight. The deceased was not put to work under the hole, but at a little distance on one side. It was a singular accident, and one which happened contrary to all reasonable expectation and without the default of any person. I therefore find myself compelled to give my judgment for the defendant.

On application a case was granted.

## SCHOOL BUILDINGS.

**Rawtenstall.**—New schools, to provide for Sunday-school as well as day-school purposes, are to be erected in Henry Street. A large room will also be provided for public assemblies, to seat 2,000. The architect is Mr. Lawrence Booth, of 88 King Street, Manchester.

**Kirkheaton.**—The corner-stone of a new Infant school has lately been laid, the site of the building comprising a plot of 2,000 square yards at Fields, Kirkheaton. Accommodation is to be provided for 200 children at an estimated cost of 1,300*l.*, which is at the rate of 6*l.* 10*s.* per head. The architect is Mr. J. W. Cocking, of Huddersfield.

**Leytonstone.**—A new Sunday-school and lecture hall connected with the Baptist chapel at Leytonstone was opened on Thursday the 19th. The cost was about 2,000*l.*, and the works have been carried out by Mr. J. Marsland, builder, of Walworth, under the direction of Mr. John E. Sears, A.R.I.B.A., architect.

**Bath.**—A Board school has been opened in Dover Street. A free treatment of Tudor style has been adopted for the building, which is of rubble stone faced with Bath freestone. Mr. C. B. Oliver, of London and Bath, is the architect, and Mr. Edward Gay, of Bath, the builder. The heating arrangement is by hot water on the high-pressure principle, by Messrs. Bacon & Son, London. Messrs. Kaye & Co., of London, supplied the patent door-locks.

## NEW BUILDINGS.

**Manchester.**—A nurses' home has been erected in the grounds of the Infirmary, and will shortly be ready for occupation. The building is of white-faced bricks, the interior fittings throughout being of pitch-pine. It is three storeys in height, twenty-eight bedrooms being on each floor, with special sitting-rooms for superintendents. Messrs. Pennington & Bridgen, of Manchester, are the architects; and the contractors, Messrs. W. Southern & Sons.

**Reformatory, Glasgow.**—A reformatory for girls at East Chapelon was formally opened on Saturday. The reformatory is two storeys in height. It has a frontage measuring 78 feet in length, while the wings on either side extend backwards for a distance of 82 feet 6 inches. On the lower flat the schoolroom, workrooms, dining-room, kitchen, and the matron's apartments are situated, while the upper storey is occupied with two large dormitories, sick-room, lavatory, and other accommodation. The rooms are large, lofty, and thoroughly ventilated. In the adjoining premises the washing-house, laundry, and dairy are conveniently situated. The building, which is intended to accommodate sixty girls, has been erected from designs prepared by Mr John Honeyman, architect, Glasgow.

## CHURCH BUILDING AND RESTORATION.

**Blochairn, N.B.**—The memorial-stone of a Free church has been laid. The church, which is designed by Mr. Malcolm Stark, jun., 167 St. Vincent Street, Glasgow, is of the fourteenth-century type of pointed architecture, and is being erected to accommodate about 800. A clock tower rises to a height of 135 feet. The cost will be about 2,900*l.*

**Latchley.**—The foundation-stone of a chapel of ease has been laid for the parish of Calstock in an out-of-the-way part of the parish. Mr. J. P. St. Aubyn is the architect, and the work will be carried out by Mr. Roskelly, of Albaston. The chapel is being built by the inhabitants mainly, those who cannot subscribe contributing labour, &c.

**Bickleigh.**—The parish church has been reopened after undergoing works of restoration and renovation. The works have been carried out under the direction of Mr. Sedding, by Mr. Cowling, of Bickleigh, builder.

**Tidcombe.**—The church at Tidcombe has been reopened after restoration. The work of restoration has been carried out under the direction of Mr. Walter Money, architect, of Newbury.

**Seaforth.**—A Congregational church has been opened. The building is of grey brick, with Stourton stone dressings; to accommodate 400 persons. Mr. Thomas Cook, of Liverpool, is the architect; and Mr. J. Holmes, of Seaforth, the contractor.



**Pelynt.**—The parish church has been reopened, after being closed for about a year for works of restoration. The restoration has been carried out from the designs of Mr. J. P. St. Aubyn. The works were executed by Mr. J. Slade, sen., joiner; Mr. P. Lean, jun., mason; and the glazing has been done by Messrs. Watson & Fouracre, of Plymouth.

**Bolam.**—The parish church has been re-seated and the building re-roofed, the chancel roof raised to its original position, and other improvements effected, under the direction of Mr. F. R. Wilson, of Alnwick.

**South Wrexall.**—The church of St. James has been reopened on the completion of works of restoration. Messrs. Weaver & Adye, of Devizes and Bradford-on-Avon, are the architects; the contractor being Mr. James Burgess, of Westbury.

**Marlow.**—Various alterations and improvements have been carried out at the parish church, which has lately been reopened. The work has been done by Mr. Y. J. Lovell, under the direction of Mr. J. J. Oldrid Scott.

**Glasbury.**—A new church, dedicated to All Saints, has been opened in the neighbourhood of Glasbury. The church has been erected from the designs of Mr. G. C. Haddon, of Hereford, selected in competition. The building is of stone from the Maesllwch estate.

**Stonehouse.**—The parish church of Stonehouse has been reopened after alteration and renovation, carried out from the plans of Mr. H. J. Snell, of Plymouth. A new chancel, organ-chamber, and vestry have been added, and the former vestry converted into a baptistery. Messrs. Palk & Partridge, of Plymouth, were the contractors.

### SANITARY WORKS.

**Cost of Sanitary Works.**—According to the report of the Local Government Board, the loans of urban and rural sanitary authorities sanctioned since 1871 amount to 24,283,257*l.*, in addition to about ten millions previously borrowed. In the last nine years urban authorities have borrowed for sanitary improvements 19,890,674*l.*, and rural authorities 1,619,396*l.* In addition, in 1876–81, loans authorised under the Artisans' and Labourers' Dwellings Improvement Act have amounted to 1,903,353*l.*; and joint boards have been empowered to borrow 689,635*l.*, mainly for sewerage. In 1879–80–81, loans for water supply have amounted to 293,880*l.*, 420,932*l.*, and 305,187*l.* in urban districts, and in rural districts to 75,473*l.*, 53,191*l.*, and 67,593*l.* For sewerage and sewage disposal they have amounted to 1,088,819*l.*, 947,540*l.*, and 593,903*l.* in urban districts, and 191,097*l.*, 98,731*l.*, and 160,267*l.* in rural districts. In some instances irregularities have been detected on the part of the authorities in relation to the liquidation of outstanding loans. They have been urged to put their financial affairs in a more satisfactory position, and in several instances arrears have been discharged and more regularity observed in the setting aside and proper investment of sinking funds. But borrowing powers exercisable without the sanction of the Board are conferred by Parliament. In ten years, exclusive of annuities and unascertained amounts, Parliament has authorised the borrowing of 33,381,517*l.*, against 24,283,257*l.* sanctioned by the Board. But in 1881 the Parliamentary sanction covered only 1,548,025*l.*, against 2,526,190*l.* requiring the sanction of the Board. Under the Artisans' and Labourers' Dwellings Improvement Act the Board have authorised the borrowing of 1,878,374*l.*, and have recommended the advance of all except 57,374*l.* by the Commissioners at a low rate of interest. The borrowers were—Birmingham, 1,500,000*l.*; Liverpool, 50,000*l.*; Norwich, 10,000*l.*; Swansea, 121,000*l.*; Walsall, 15,000*l.*; and Wolverhampton, 182,374*l.*

### GENERAL.

**M. Maspero**, the Curator of the Boulak Museum, returned to Cairo on October 6. He has made an examination of the contents of the museum, and has announced that he finds everything absolutely as it was left by him.

**Mr. Woolner, R.A.**, has completed a bust of Mr. Gladstone for the Corporation of London. A bust of Lord Beaconsfield, by Mr. Belt, is also to be added to the Guildhall collection.

**Mr. C. J. Heywood**, of Chaseley, has undertaken the cost of restoring a bay in the nave of Manchester Cathedral.

**Mr. George Fuller**, who for many years assisted his father, the late Mr. George Fuller, has commenced business as a land agent and surveyor at 35 Bucklersbury, E.C.

**Mr. J. Sant, R.A.**, has painted a portrait of Lady Bolsover, which has been presented to the Baroness by the tradespeople of the district.

**Miss Ascough**, member of the Birmingham Society of Artists, has painted a picture of the well-known St. Bernard "Hermit," owned by Mr. Goodwin, Dudley.

**Mr. J. Thomas**, City Surveyor of Bristol, has visited Bideford this week to inspect and adjudicate on the plans for the new market.

**Mr. W. E. Glasier and Mr. W. E. M. Glasier** have retired from the firm of Messrs. Glasier & Sons, surveyors and land agents, of Charing Cross, and Mr. G. H. Brougham Glasier has taken into partnership Mr. Henry J. Dowden, who for many years past has been with Messrs. Driver & Co., of Whitehall. The style of the firm will still be Glasier & Sons.

**The Building Works** belonging to Messrs. Bull & Sons at Southampton have been destroyed by fire. In addition to Messrs. Bull & Sons' valuable plant, machinery, stock of seasoned wood, &c., a large quantity of prepared carving and other works for the completion of the Law Courts and for the new Houses of Parliament, which the firm are now erecting at Cape Town, was destroyed.

**An Art Exhibition** was opened at Stafford on Tuesday. It contains a collection of paintings by ancient and modern masters, which have been lent from private galleries in the county, pottery from most of the leading manufacturers of North Staffordshire, art metal work, &c.

**An Arcade** of fourteen shops and four houses, roofed with glass, is to be erected at Ilfracombe. Messrs. Robbins & Co., of Ilfracombe, are the architects. The estimated cost of the work is about 3,000*l.* Mr. J. L. Brooks is the contractor.

**Hardwick Church**, in the county of Norfolk, has been restored. Sir Peter Gleane, a supporter of Charles I. and a frequent benefactor to the parish, was the donor of the seventeenth-century carved woodwork. His pew in the chancel was so large that it acquired the nickname of the "bedstead pew"; this has now been removed to the west end of the church, and does duty as a vestry.

**A Mural Monument**, executed by Mr. T. King, of Hereford, from the designs of Mr. Lewis Powell, architect, of Hereford, has been erected in Weobley parish church, in memory of Mrs. Moore, of Chadnor.

**A Large Highway Bridge** over the River Dee at Newbridge, Ruabon, has been condemned by the county surveyor and traffic stopped. The reconstruction will take about six months to effect.

**Six Bronze Statuettes**, of good workmanship, in excellent preservation, have been recently excavated at Pompeii, representing Apollo with his lyre, Mercury, Esculapius, Hercules, and two Lares. They were found, together with a bronze lamp, in a little shrine, on the walls of which is painted a figure of Fortune.

**The Liverpool Art Club** have arranged to hold a loan exhibition of works by the late Hablot K. Browne ("Phiz").

**The Tunnel under the Elbe**, between the town of Hamburg and the island of Steinwärder, has been opened. It is 800 metres in length, and cost about 1,000,000*l.*

**The Public Monuments Admission Fees** in Edinburgh have, after paying all expenses connected with the care of monuments, left a profit for the year of 286*l.* 2*s.* 3*d.* From the accumulation of the balances the Town Council have been able to expend 1,418*l.* 4*s.* 10*d.* on statues and statuettes, which have been placed during the year in the niches of the Scott Monument, while there still remains a balance of money in hand amounting to 1,442*l.* 17*s.* 6*d.*

**The Theatre Royal, Glasgow**, was on Wednesday offered for sale at the reduced upset price of 12,000*l.*, being 6,000*l.* under the sum at which the building was first exposed on August 2 last. The Glasgow Theatre and Opera House Company, Limited, were the purchasers at the upset price.

**The Manchester City Council** have approved of a resolution that application should be made to the Board of Trade for powers to supply electricity for public and private purposes within the city.

**The Walker Art Gallery**, Liverpool, has been enriched with the following donations:—A portrait of Mr. D. MacIver, M.P., by Hubert Herkomer; *Venus beseeching Vulcan to forge a Suit of Armour for Aeneas*, by Rubens (from the collection of the late Don Miguel, of Spain); *The Holy Family*, artist unknown, but supposed to be of the Bolognese school; landscape, by Francesco Casanova Romanelli; *The Rape of Europa* (from the collection of the late Alexander Nowell, of Underly Park, Westmoreland); landscape, by Gaspard Poussin (from the collection of the late A. Nowell); *A German Birthday in 1575*, by C. Napier Hemy. *An Incident of Isandula*, by Mr. Woodville, is to be purchased for the permanent collection.

**The New Municipal Buildings, Ayr.**—A meeting of the Town Council of Ayr was held on Monday, when abstracts of the accounts for the new municipal buildings were presented. The Provost said the total cost amounted to 38,917*l.* 15*s.* 2*d.* This sum included the cost of site, also of the portion of the old buildings which had been connected with the new. It might appear very much in excess of the original estimate, but it was never expected that the buildings would be completed without large additions to the estimates, as no account was taken of the cost of repairs and alterations of the old buildings, although moderate schedule rates were fixed for the work; and during the course of construction another property was purchased, and a large addition made to the back portion of the building.



# The Architect.

## THE PROGRESS OF FURNITURE EXHIBITIONS.



AMONGST the various forms which have been assumed by the enterprise of collecting for public exhibition the productions of current invention, there has been none, as we presume to think, and can be none, of more direct and substantial interest to the English people than the display in this manner of the goods which the rival manufacturers of furniture—

taking the phrase in a wide sense—are presenting from day to day for their purchase. It matters not for the purpose of our argument whether the style, taste, feeling, and so forth, prevalent at the moment may be regarded as good or bad, worthy or unworthy, hopeful or not; the proposition we venture to lay down (and we are proud to say it has been long ago dwelt upon in this journal) is no less than this—that of all artistic work whatever, that kind which in the greatest measure promotes the enjoyment of all, and calls for the sympathy of all, from the highest to the lowest in the land, is the unpretentious work of everyday ornament and decoration in connection with the household goods which are indeed our household gods. There are many millions of us to whom the periodical exhibitions of paintings and sculpture at the west end of London are unknown; to whom the historical collections at South Kensington are unintelligible; to whom a Hamilton sale is but a stroke of business in the empyrean; to whom the National Gallery and the British Museum are no more than the Arabian Nights' Entertainments and the Lord Mayor's Show, all standing on the same unpractical level as wonders of the world not wholly beyond the suspicion of necromancy; millions of the supercilious well-to-do whose god, when not their belly, is their breeches-pocket, and whose opinion of "boets and bainters" is no better than King GEORGE II.'s; millions of aspiring shopkeepers, whose emotions reach never higher than the level of the parish vestry; millions of hard-working operatives whose excursions into dreamland are only of the type of a bean-feast at Gravesend or a Bank Holiday in Epping Forest; and, alas! millions upon millions still whose lives are passed in the squalor and grime of abject toil and the soul's dirt of too degrading recreations; and yet there shall be found amongst all these millions only exceptions sufficient to prove the rule that none are so lowly and despicable as to be without that sense of (let us call it) finery which seeks pleasure and secures it in the little graces of household stuff, and none so exalted in dignity or in intellect as to rise superior to the self-same cheap delight.

The Fine Art Industrial Exhibition now open at Manchester seems to be an exceedingly satisfactory illustration of the great progress which England is making in the direction of extending and expanding this enjoyment of household art. If we compare it with such exhibitions of furniture, for instance, as those which have been held in the hall at Islington only recently, we cannot help perceiving that there is a motive at work which is beginning at last to assert itself more boldly in the right direction. That is to say, the merits of mere workmanship and price are giving place to those of artistic design, and there is growing up a recognition of the fact that Art is All Art, and not two or three select provinces of Art. And thus there is spreading abroad every day that practical liberality of artistic principle which, already identified with the unexpected admission of a decorative specialist into the Royal Academy, may before many more years have passed lead to the acceptance in that supreme representative body, without any misgiving, of not one but many specialists of the same class, and those not nominally and academically architects, but actually and confessedly manufacturing tradesmen. The collection now in question no longer concerns itself materially with what are called the higher arts. In other words, the promoters of such an enterprise no longer waste their energies in the affectation of a belief in the exclusive traditions of the old Italian Academies, in which the *credo*, dignified but crude, went to maintain that "the Arts" had always been in number

exactly three, and three must always remain. This short-sighted and narrow view of things may remind us of the time when astronomers were taught to observe in the space between Mars and Jupiter four stars, into which it had pleased the powers of Nature to subdivide, as it was thought, by some explosive force the proper planet of the system once revolving there. Ceres, Pallas, Juno, and Vesta, they were called, and there was an end of them. But in process of time there came into the field of inquiry explorers who discovered a fifth, a sixth, at length a twentieth, a fiftieth, a hundred and twentieth, a hundred and fiftieth, and ten or a dozen in a single year, and six or seven brought in one after another by those audacious discoverers of the futility of traditions, the Anglo-Americans, men bearing homely names like PETERS and WATSON, and wielding the weapons of discovery at places with names as homely, such as Clinton and Ann Arbor. So also of the three arts which constituted in our youth "the circle of the Arts" formative and constructive—leaving poetry and music, that is to say, apart, and keeping to architecture, sculpture, and painting—all alike are now being multiplied day by day by the recognition, not of new and strange arts, but of old arts well known and well worn, and more or less widely practised from time immemorial, but for some reason hitherto held in a vague kind of subjection or bondage, or relegated to an unexplained inferiority, and chiefly because their practitioners were "tradesmen" and "manufacturers," and therefore not "artists," painting and carving and designing and constructing in "workshops" and not "studios"; the whole distinction, however, beginning to vanish, and gradually vanishing more and more, into thin air, or something thinner than air, as common sense is applied to the true state of the case. An exhibition, therefore, now and then, of the works of these artistic tradesmen and their workshops, is all that is wanted to complete the dissipation of the clouds of priggish prejudice which have hitherto obscured the true application of the great artistic doctrine of the day—the unity of art in all its many-sidedness, and the "égalité" of artists in all their variety of pursuits.

Professed poetry is proverbially akin to madness; and it is part of the price which Mr. MORRIS must continue to pay for having acquired a poetical reputation that his more prosaic utterances will be taken for ever by the multitude with a large grain of salt. To be plain with him, it is doubtful whether one Englishman in a hundred to whom the author of *The Earthly Paradise* might in the way of honest trade communicate the price of a piece of wall hanging, would find himself at all able to believe what he had been told in the ordinary sense of the language, unless it were confirmed by the untainted testimony of some more sober-minded member of his commercial staff. Accordingly, when he makes his speech at Manchester—and a very able speech it is—upon the Progress of Decorative Art in England,\* the great "aesthetic upholsterer" must not expect the average reader to receive it in precisely the way that is intended; and if for this very reason it comes to pass that he himself is led to use language not "understood of the people," this is but a natural reaction which, if it increases mutual embarrassment, fortunately does not now decrease, as once it might have done, mutual honour and confidence. But at any rate, figurative as his phraseology may sometimes appear to be in the eyes of such as the Manchester cotton printers—and perhaps particularly so when he invites those shrewd votaries of commerce pure and simple to regard themselves as such functionaries of the aesthetic that every one of them "most certainly should be somewhat of an artist," so that he may "turn out nothing but what may do credit to his own reason and intellect," thereby "making up his mind to give up a great part, probably the greatest part, of his business," and thereby "make a new era in the advance of the art"—figurative as such language may seem to be, no doubt need be entertained, even by the most prosaic dealer in the driest of dry goods, that there is here expressed a great principle of trade. That principle is, no more, but no less, than this—that if Manchester cottons, as a typical manufacture, are to retain their place in the markets of the world, it is greatly by the aid of artistic design that this must be done. So also with many other things—if English workpeople are to keep their hold upon even the English public, it is greatly by the artistic touch that this must be done. No exhibitions, therefore, of those miscellaneous things of personal and household use to which we are indebted for so much everyday pleasure, ought nowadays to be other-

\* See p. 262 ante; October 28.



wise than exhibitions of things artistic. We need not disparage the manipulative excellence of high-class workmanship ; but the time is coming when, without artistic feeling, the best of this will be driven out of the field—we do not say by inferior work, but by work equally good *plus* superior design. For this superior design, be it remembered, costs very little in money, and not necessarily very much in brains ; and if, as Mr. MORRIS hints, the manufacturer will but take the trouble to cultivate what artistic power may happen to be in himself, the profit may cost him nothing at all but the pleasure of intellectual exercise.

#### NOTES ON WINTER EXHIBITIONS.

THE winter season is heralded as usual by the opening of numberless picture exhibitions, passing from one to the other of which the visitor is fain to wonder at the exhaustless supply of art—good, bad, and indifferent—which pours through the London market. The supplies become increasingly “international” in character, so that it might almost be supposed that as many foreign works found purchasers as do the native products. The Haymarket galleries, the French Gallery, the various Bond Street exhibitions, all set forth Continental art for that London public which may well repudiate any accusation of “insular prejudice” in art matters.

The Dudley Gallery, almost alone of open exhibitions, is true to the national colours. But even here the place of honour is assigned, and worthily filled, by a painter who in style at least is a foreigner, Mr. CLAUSEN. *A Peasant Girl* (166) is a life-scale study to the knees of such a grave-faced maid of the fields as JULES BRETON has loved to paint, save that this girl, while rough with toil, looks out on the world with a cheerful content rather than with the sorrowful endurance of the French master's homely models. This is strong, fresh work, more precise in modelling of form than is Mr. CLAUSEN's wont, and distinct in character, as are also his other minor contributions in the gallery. The figure subjects generally are not remarkable. Miss KATE THOMPSON's head of *Olivia* (75) is the best she has shown, and indicates the influence of Mr. TADEMA in the solid painting. Mrs. CARR HASTINGS' *Helen* (68) is as flower-like in tint and as ill-drawn as usual. A study of a man in his library, arrested in writing for want of *Words to Express his Thoughts* (131), shows Mr. THOMAS DAVIDSON to have a clean, direct way of working, and considerable artist-like knack in the putting together of his material. Among rustic studies, the *Cornish Lad* (79) of P. J. JANSEN strikes one as possessing genuine character, while the light and shade is capital. There is humour in the situation and much luminosity in HAMILTON MACALLUM's picture of boys spending a *Summer Half-Holiday* (80) by baths in a very blue sea, taken in detachments, half the party sporting in the water, half on shore, ranged in watchful rows, eager for their turn. This is a showy and amusing picture, but it has unveracities enough ; as for example, the representation of boys floating on to the beach, where there is obviously no room for their bodies in the shallow water, and yet nothing but heads and shoulders are visible. Mr. HEMY sends a couple of very strong studies of fishing-boats and rough waves (161, 176) ; Mr. HENRY MOORE contributes from his store of subjects gathered this year *A Summer Afternoon, Coast of Jersey* (229), vigorous, true in character of rock and ripple, brilliant, but too *painty*, as of late this artist's work has inclined to be. Indeed, this is the fault of much work here as elsewhere ; the crude streaking and loading of pigment becomes a libel on the painter's art ; the material is thrust offensively forward, and the standpoint for observation of such effect as a picture may be intended to produce becomes a matter of intricate calculation ; in which a pace out is fatal.

The amount of pleasant landscape is always considerable in the Dudley Gallery. Out of the average level rise certain bits by Mr. E. WATERLOW, especially *Evening in the Marshes* (214) ; an unpretending but excellent study of detail, *The Pool in the Glen* (198), by THOMAS IRELAND ; the pictures of ALFRED and of GUSTAVE DE BREANSKI (the poetic *Marsh at Wargrave* (37) by the first being only rather spoilt by “plastering” in the sky) ; and lastly, one or two clever sketches by CLEM LAMBERT, hung on the door screen (408 and 425). These are perhaps as artistic work as any in the room, delicious in tone, and having a finesse in execution that would indicate the practice of one who can work with delicate tools.

In flower-painting M. FANTIN leads off ; Miss H. THORNEY-CROFT is supreme for colour and outline ; and Miss LETITIA PARSONS shows faithful study and a better eye for tint than for arrangement.

A chief attraction of the French Gallery is the well-known picture by Mdle. HENRIETTE BROWN—*Alsace*, 1870—in the broad and well-considered style of the painter, though as to the serious face of the Alsatian woman who is here painted asking alms for her country, the painting is more flimsy than should have been. The best example Mr. WALLIS has yet brought forward of the Austrian Professor MÜLLER is *The Guardian of the Sacred Well*, wherein the skill is consummate which renders, even to illusion, the blinding white sunshine that searches out every crevice and cranny of crumbling wall, and darkens by emphasis the swarthy skins and Oriental draperies of the Arab guard and the child who drinks at the well. Among the multiplicity of little cabinet *genre* pictures, those by C. SEILER have a mastery of manner and largeness of style that make them independent of mere scale. *A Freischütz Bargain*, wherein marksmen, Tyrolese by costume, examine the rifles of an old dealer in various wares, whose shop is in a picturesque sort of vault, is simply first-rate work within its limited purpose ; the capacity of the artist appears to stretch far beyond the accident of his subject. One or two pictures by Mr. W. H. BARTLETT still indicate rather promise than performance. *Mussel-Gatherers, Venice*, and the studies of sandy sea-coast and a perspective of French highroad, *Gortheen Bay*, and *The Heat and Burthen of the Day*, all show the same power of giving interest to simple, even rather bald, pictorial material by broad atmospheric effect and a certain originality of manner. But there seems no reason why Mr. BARTLETT should not aim at grace as well as character in his figures, or why he should not concentrate his compositions into something which looks less like accident and more like artistic intention. One or two of Mr. JOHN VARLEY's clever Egyptian studies have found their way hither. This artist should be coming to the front by-and-by. The name of a Spanish artist, R. SANTORO, is affixed to some dashing bits of Venetian waterway and buildings : the painter seems to do a good deal with a sort of thumb-nail touch, which becomes a mannerism, if not a trick. Other work worth noting is, of course, to be found in the room, but it must be confessed that the exhibition as a whole is far below the mark, and contains much of what in literary slang is called “padding.”

At Mr. McLEAN's gallery a charming collection of water-colour drawings is gathered, new and old, foreign and English. We have especially marked the effective sketches of L. HARPIGNIES : imaginative pieces of effect, done for the most part on rough absorbent paper, with a gummy medium, and relying much on contrast of pale or flushed sky with dark masses of foliage or rock. They are strongly reminiscent of some of the late JOHN VARLEY's things, and are often very beautiful. A gallant show of CLARA MONTALBA's drawings show her at her best : the *London Bridge* and *A Thames Wharf* are capital examples of her clever draughtsmanship ; *The Choir of St. Mark's* gives the wondrous golden glories and solemn shadows of that unique interior as they have rarely been felt or expressed. The clean completeness of J. LEWIS BROWNE's horses and their riders comes out well in several pieces, and for like quality, with less breadth and more delicacy, should be noted a little drawing of girls riding on the sea-sands, called *The Amazons*, by J. MAX CLAUDE. If our young Academician, Mr. A. C. Gow, is going to paint a big picture from the exceedingly clever study called *A Highland Raid*—an interior with a *mêlée* of fighting men—we hope he will alter the scheme of colour, that now mars the aim of the vivacious composition and capital drawing. A large Welsh subject, *The Land of Antique Slate*, by ALFRED HUNT, has the peculiar radiance of the artist's sunny scenes, and very finely felt mountain form, but it inclines too much to a general yellowness of tone. Leading men must have their followers, but we have seldom seen a closer reflection than is a picture of *Haymaking on the Thames*, by G. S. WALTON, of like subjects by GEORGE FRIPP.

Curiosity, when not admiration, will bring visitors to Mr. TOOTH's showrooms to see the famous picture by BASTIEN LEPAGE, *Le Père Jacques* ; and very diverse will be the impressions that singularly clever and singularly disagreeable piece of work will produce. Père JACQUES is a type, and his labour is typical ; he is a toothless, ruddy-faced, hard-eyed man, old before his time with rough toil, meagre of body, probably



rheumatic, certainly weak-kneed, and sour-blooded. He has gathered a prodigious bundle of sticks, and stands among the fluttering autumn leaves and bare stems of the copse fronting the spectator, his shoulders bent beneath the burden, his head projecting forward out of the canvas, and his body and legs retiring into it. The observation points to an oddity, an incongruity, in the realism of M. LEPAGE. The man's head is real to painful illusion: it seems to start out of the frame and swear sullenly at the onlooker; the fagots on his back threaten to fall at the spectator's feet. Why, then, are his legs merged after the fashion of a "spirit photograph." The same peculiarity attends the appearance of the little girl in a blue blouse, who stoops among the tangle to gather a flower; her body also is evanescent, and altogether she looks farther off than the head of PÈRE JACQUES, who stands behind her. The power of the painter is undeniable; his handling, his artistry, is even magnificent; but his art, taken as a whole, within that range of rustic life to which another French artist, J. F. MILLET, gave dignity and pathos while he no less emphasised the toil and suffering, is to us simply abhorrent. This collection contains many foreign works of high class; among them *Market-day at Tangiers* is the best picture by G. SIMONI we have seen—true to the life in the Arab crowd, redolent of African atmosphere, and composed with admirable spirit.

The American artist, D. RIDGWAY KNIGHT, is represented by a characteristic work, a picture of *Gossips*—a group of women of the people having coffee on a terrace overlooking a green country and distant town. Probably the scene may be laid at one of the popular resorts in the environs of Paris. The study of character and manners in the various figures is close and marked by a refined humour, and the picture is well painted. As is usual with this artist we see no exaggeration, and in this respect he differs from many painted in France who select similar subjects.

Among French works that draw a certain class of public favour are the female heads by G. JACQUET, with their fresh, luscious prettiness, so exquisitely manipulated. The touch of the artist is a marvel of delicate skill, which one may admire quite apart from the general style of the art to which he devotes it.

By a man of the rising English school Mr. S. E. WALLER is *Flown*, an incident in Jacobite times, when the officers of the Crown, sent down to a lone country mansion to catch conspirators, find before them an empty house. Horses are Mr. WALLER's forte, but the men are well enough, and the story is graphically set forth. The handling of the painter seems to have gained in vigour. In the sorrowful vein of JOSEF ISRAËLS is *No Tidings*, by F. HOLL, A.R.A., a picture of striking chiaroscuro, full of character in the group of the fisherman's wife, dignified in her sad expectation, and the listless lads gathered about the ingle nook. Mr. Gow, A.R.A., has a couple of blue-jacketed jockeys adjusting their favours on the wedding morn, which has the humour of STACY MARKS, though not his pleasant quaintness. A large study of sea, by W. J. SHAW, *Crossing the Bar*, is marked by the unpleasant contrast of slaty purple sky and chill green water which the painter affects; and surely these fine curves of cold water, even in the trouble of a sandbank, would not churn up such woolly foam. Over the way hangs a dashing sea-piece by E. BERTHELOU, *Rough Weather off Tréport*.

### THE SHEFFIELD MUSEUM.

A FEW months ago Mr. Ruskin asked to be entrusted with funds with which to enable him to purchase several of the illuminated manuscripts of the Hamilton collection. It was his intention to have placed his purchases in the St. George's Museum at Walkley, Sheffield. Mr. Ruskin, having carefully examined these manuscripts, knew their value, and was anxious to secure a number of them. In a letter to Mr. Swan, the Curator, he expresses his regret that no funds whatever have been sent in response to his appeal, and he has been unable to make any purchases at the sale, although he would have laid out the money to greater advantage than any one else. Mr. Ruskin is now abroad superintending the work of three artists he has engaged making copies of works by eminent masters, in both painting and sculpture, for the Walkley Museum, where works of art have recently accumulated to such an extent that an additional temporary store-room 40 feet in length has had to be built. The erection of a suitable building by the people of Sheffield is now under consideration, and the site suggested is at Endcliffe, near the residence of Sir John Brown.

### THE ARCHITECTURAL ASSOCIATION.

THE annual conversazione of this Society took place on Friday evening, the 27th ult. The prizes were distributed by the President, Mr. E. G. Hayes, to the successful students in the past session, as follows:—

*Association Travelling Studentship*.—Mr. W. A. Pite (medal and studentship); 2nd prize, Mr. F. H. Tulloch; hon. mention, Mr. A. S. Haynes.

*Association Medal*.—Mr. G. W. Ward (medal and prize).

*The Architectural Union Company's Prize*.—Mr. J. S. Newberry.

*Class of Design*.—1st and 2nd prizes divided between Mr. G. W. Miller and Mr. J. G. Sankey (bracketed equal); hon. mention, Mr. T. E. Pryce and Mr. C. W. Wilson.

*Elementary Class of Design*.—1st prize, Mr. G. G. Woodward; 2nd prize, Mr. A. C. Houston; hon. mention, Mr. W. A. Webb and Mr. G. A. Oatley.

*Class of Colour Decoration*.—1st prize, Mr. S. R. J. Smith; hon. mention, Mr. C. T. Coggin.

*Class of Construction*.—1st prize, Mr. A. H. Gausden; 2nd prize, Mr. A. C. Houston; hon. mention, Mr. L. Hunt.

*Study of Planning and Specification*.—1st prize, Mr. A. Gover. 2nd prize, Mr. C. G. Killmister and Mr. W. J. Landor (bracketed equal).

In connection with the course of lectures given by Mr. Tarver a prize and certificate were awarded to Mr. R. L. Cole. Certificates were also awarded to Messrs. F. Webb, E. H. Selby, T. H. Roberts, and T. E. Newberry.

In connection with the series given by Mr. Blashill a prize and certificate were awarded to Mr. H. T. Nixon; and certificates to Messrs. C. H. Brodie, R. E. Crossland, J. H. Buckeridge, and E. P. Tucker.

#### The Inaugural Address.

The President then delivered his address, in the course of which he said:—

There have been several events of importance which have taken place during the past year in the architectural world to which I must briefly allude. This time last year my predecessor in this chair was called upon to deplore the loss the profession had sustained by the death of William Burges; it is now my sad duty to add my small tribute of praise to the memory of George Edmund Street, who died in December of last year. Mr. Street was so well known, and his talents so universally admired, that it is quite unnecessary for me to dilate upon them. Any one who examines carefully his last and greatest work, the new Royal Courts of Justice, which he was not permitted to see completed, can but be struck with the infinite variety in design and beauty in detail which meet the eye in every part of that vast building; it is so evidently the work of a master mind and hand, and one upon which that mind and hand have lavished a wealth of thought and care.

Another event of considerable importance to the profession is the institution of an examination for all those who may now desire to enter the ranks of the Royal Institute of British Architects. It is hoped that in the course of time this examination will be firmly established, and that it will be considered a necessary qualification for all who may wish to practise in this country as architects. Hitherto, unfortunately, nothing of the kind has been necessary; the principal qualification being a brass plate and a certain amount of confidence. The result of this has been that the profession has frequently suffered severely in being misrepresented by untrained and unsuitable practitioners. If we consider the importance of the interests frequently involved in an architect's practice, and the extent of the knowledge required to produce at all satisfactory results, it cannot be doubted that the step the Institute has taken is a most important one and in the right direction. It is satisfactory for me to remark that out of nineteen passed candidates this year ten are members of the Association.

The subject of architectural competitions is one which has received a large amount of consideration during the past session, but no satisfactory conclusions have been arrived at, and the discussion is to be resumed in the next session. The objects to be attained are—to frame such rules and regulations for the conduct of competitions as will obtain the approval and approbation of the profession generally, and to persuade the public in all cases to adopt such rules. Architects do not want to discourage competitions; but what they do want is to have the instructions clearly framed by an expert, to be satisfied that the requirements laid down will be strictly adhered to in every respect, and that the final selection, if possible—or, if not, the selection of some small number—shall be made by a professional assessor, whose position and qualification shall be such as to command respect. Another great object that architects have in view in discussing the question is to reduce as far as possible the amount of work to be done. In these days, when the promoters of nearly every building enterprise, small or large, must have a competition, and when so many architects are found to send in designs for anything upon almost any terms, it behoves those who have the interests of the profession at heart to make a decided stand. The matter really is in our own hands,



if architects can only be got to agree as to the terms and conditions upon which competitions should be conducted, and to agree further not to compete unless upon such conditions. The Committees and Boards, who desire in most cases to act fairly and honourably, would, I doubt not, be generally ready to adopt any such leading principles as have been suggested for their guidance.

I have referred at some length in the earlier portions of my remarks to the assistance which is given by the Association in training the young architect, and have pointed out some of the immediate results of that training. Perhaps I may be allowed to trespass upon your time for a few minutes more, and to look at the state of our art generally. I think the Association may justly claim to have exercised considerable influence in guiding the taste and supplying the wants of the public in this great city, and in many other parts of the country. We are often told by our critics that we have no style of our own in this nineteenth century, and that we are mere copyists. The first part of the statement is no doubt true, but I am rather disposed to adopt the opinion of those who think that a new and distinct style of architecture is an impossibility. For what we call style is, as you are well aware, a combination in the masses and voids, and in the details and ornament, of certain well-known and distinctive forms: and if it is a fact, as most of us believe, that these forms have in past ages been well-nigh exhausted, the best thing we can do is what we are doing now, to adopt such a period of work as we or our clients may consider best suited for the purpose, and to design our buildings in accordance therewith. If some of our critics would kindly supply us with a few brand new forms, such as would be suitable, say, for window openings, and a few combinations of new forms which we can use for mouldings, architects will be glad to take the matter in hand; and there is no doubt that upon such a basis an entirely new style of architecture would soon be evolved. As to the statement that in reviving old work we are mere copyists, I do not think we need allow that to trouble us, because we know that in designing a building in any style we have to arrange new combinations suited to its requirements and situation, and that as much, or more, knowledge, ingenuity, and originality is required to do this, as would be the case if we were living at the period when that particular style was in vogue.

This century has seen a revival of the taste for Gothic architecture, and the old work has been studied, measured, and sketched, until its spirit has been thoroughly acquired, and buildings of all kinds have been erected which have carried on the tradition and feeling of the style in a most perfect manner, and in a manner which can no more be said to be a copying of old work than one building of the twelfth century can be said to be copied from another of the same date. The Gothic work of different periods, thus revived, still continues, and probably will continue to be used for all ecclesiastical work, and it would almost seem to have been developed in new ways, in consequence of the introduction of new materials. But it is a question if this century will see many more secular buildings of importance erected in the style.

Then we have had a revival of a kind of work which is now commonly known as Queen Anne, but which includes a great variety of features, both English and foreign, which were in use before and after that time. The work has given scope to great originality of idea, and it has been found suitable for all kinds of secular building, and seems likely to hold its own for some time to come.

We have also seen erected recently some few buildings in which late Gothic features with Classic details are used, and it is still open to us to adopt, more largely than has hitherto been done, mixtures in the art of architecture. I may refer to one well-known extreme example, to illustrate my meaning—the entrance gateway to the old schools at Oxford. Here we may see the five orders of Classic architecture, one above another, on the face of a building which has Gothic windows, and is crowned with a battlemented parapet and pinnacles. The combination in this particular case is more curious than beautiful; but there are many other buildings which were erected in the sixteenth or seventeenth centuries, in which Gothic and Classic forms are combined with happy results. You will find in the library an interesting series of photographs which were taken by one of our members on the recent excursion, some of which are from buildings of this character and well worthy of your inspection. The tendency at the present time would rather seem to be towards work of this description. It is well suited to modern requirements in secular building, and it gives scope for great originality in treatment.

Thus it is clear that the current of thought in the architectural world flows along; at times it has been somewhat slow and sluggish, but now again it appears full of life and energy. We on our part are doing our best to maintain that life; to breathe into our designs that nameless spirit of beauty which should pervade every architectural work, and which is necessary to raise it above the sphere of mere building. We are stimulated in our exertions by the consciousness that we are devoting our energies to a noble study; that we are following one of the few callings in life which are worth doing for their own sake alone, and by the recollection of the enduring character of our work. And with all these thoughts before us, we look for kindly appreciation from the public, for thoughtful and discerning criticism, so that we may be rewarded

by pleasure in our own work, and enabled, as far as possible, in everything we do, to leave behind us a memorial which may be regarded as a thing of beauty and a joy for ever.

Mr. T. M. RICKMAN said it was some twenty-eight years since he occupied the presidential chair, and he was pleased to find the same spirit animating the society as formerly. They always felt, and the Association still felt, that the business of the society was that of students of architecture, while the business of the elder society was the practice of architecture. He was pleased to find that the class of men coming forward as students were likely to do much honour to the practice of architecture.

Mr. J. B. FRASER (President of the Leeds Architectural Society) said he had great pleasure in being present and hearing of the valuable work done by the society. In the provinces they looked on the Association as taking the lead in all matters connected with the profession, and they gave them all credit in an educational point of view.

Mr. WILLIAM WHITE, F.S.A., proposed a vote of thanks to the President for the address he had given. Among the several points of interest the President had sketched out in his address one especially related to the sad loss sustained in the death of Mr. Street, one of his oldest and dearest friends. It was some thirty years ago that he was associated with Mr. Street alone in making some suggestions which would be most appropriately carried out now, if that could be; but he thought that the Architectural Association had to a great extent taken up the project they then were considering, viz. the formation of an architectural college. They wrote to three persons, distinguished men at that time, and had most kind and cordial replies from them, but the time had not then arrived for carrying the project into execution. Mr. White then remarked that no new style could be developed without a scrupulous adhesion to some definite principles and line of design, and that especial line he thought had been taken up by the Association with the greatest benefit to the profession and public at large. He had always deprecated a mere adoption of eclecticism, for, having the choice of the world before them, architecture did not consist in the incongruous grouping together of a lot of collected material without order or system.

Mr. JOHN NORTON, in seconding the vote of thanks, expressed his hopes that the new session would be successful.

The PRESIDENT acknowledged the vote in a short reply, and the formal part of the proceedings concluded.

The conversazione was well attended, notwithstanding the inclemency of the weather, about 270 of the members being present, independently of their friends. The pictures in the Institute Library were lent for exhibition by the artists and owners for the occasion, and the drawings of the various classes were hung in the rooms of the Royal Institute of British Architects, which had been kindly placed by the Council at the disposal of the Architectural Association. Among these were the drawings executed by Mr. Pite, the holder of the Travelling Studentship. Mr. Phené Spiers contributed a collection of water-colour drawings and specimens of Japanese hanging drawings. The photographs taken during the excursion of the Association have already been alluded to in the President's address.

## MODERN PROCESSES IN BOOK ILLUSTRATION.\*

PREVIOUS to the invention of the different modes of photographic engraving, lithography offered the only means of reproducing an original drawing in absolute facsimile. Wood and metal both alike demanded the aid of the engraver to carry out and interpret the artist's design, but in lithography the artist could work directly upon the stone, or, if the drawing were on paper, it would be mechanically transferred to the stone. Lithography has not in England attracted any very serious artistic notice, nor has it been carried to any great degree of perfection. But in France its peculiar resources have been more highly esteemed, and many admirable lithographs have been produced, in which the draughtsman has adapted himself with tact and skill to the special conditions of the art. It may be worth while to say a word about the actual process of lithography, for the reason that it has an important bearing upon the different modes of photographic engraving which I am about to describe. The principle of lithography, it should be understood, is not purely mechanical. The impressions from the stone are taken in a press, but the ink is not delivered from a raised surface as in the case of a wood-block, or from an incised line as in the case of a metal plate. The picture is neither cut into the surface of the stone nor elevated in relief upon it, and therefore the means by which successive impressions are obtained may be said to be chemical rather than mechanical. The stone used in lithography is a sort of calcareous slate which is found in Bavaria. It is carefully prepared, either by graining or

\* From a report of a Cantor lecture by Mr. J. Comyns Carr, published in the *Journal of the Society of Arts*.



polishing, according to the character of the drawing that is to be reproduced. In either case, the ink or chalk employed by the draughtsman is of special composition, being, in fact, a mixture of grease and soap coloured with lamp-black. When the drawing has been made in this material, a weak solution of nitrous acid is poured over it, in order to render the ink or chalk insoluble in water. The necessity for this precaution arises from the fact that the stone has to be wetted with a sponge before each impression is taken. The water so applied to the surface is repelled by those parts which are covered with the greasy chalk, and is absorbed into the untouched portions of the stone; and, conversely, when the roller, covered with printing-ink, is now passed over the surface, the ink, which is combined with oil, unites readily with the greasy surface of the drawing, and is repelled by the wet surface of the stone where the water has been imbibed. The stone is now ready for printing, and the same process is repeated for every impression. Lithographic printing therefore depends, it will be observed, upon the antipathy of oil and water. The greasy nature of the material employed by the draughtsman unites with the grease of the ink, and enables the printer to multiply impressions without loss of any of the qualities of his original design. But lithographs are not always drawn directly on the stone. They can be transferred from paper specially prepared for the purpose; and it is the power of transferring the original design which enables lithography to make use of the resources of the photographer.

I have described the process of lithography, because it will enable you the better to understand the means by which a photo-engraving in relief is usually obtained. These relief blocks have now been in use for some years, but it is only recently that they have shown signs of sufficient excellence to render them worthy rivals of wood engraving. Their great merit, where they are successful, is that they give us the absolute autograph of the artist. The photographer here takes the place of the wood engraver, and allows the original draughtsman to speak for himself. Or, at least, it should rather be said that this is so in principle; in practice it must be acknowledged that photography cannot always claim the absolute veracity which is sometimes attributed to it. It inevitably coarsens, to some extent, even the simple lines of a pen-and-ink drawing, and it takes no account of varying depth or strength of colour. The photographic engraver can distinguish between a broad line and a thin line, though he is apt to exaggerate both; but he is wholly powerless to effect any distinction between a dark line and a light line. In this respect it must be admitted that all these processes are still inferior in effect to the wood-block, in the treatment of which the engraver has at his command numerous devices for giving varieties and refinements of tone. But it must be allowed, nevertheless, that in dispensing with the services of the engraver there is an important gain of another kind. It is something to have the actual touch of the original artist, even though the interpretation is somewhat rough and clumsy; and when the artist has learned to adapt his work to the conditions of the process, results will be obtained such as could not be secured even by the most painstaking and conscientious engraver. For it is to be observed that the process itself is capable of a vast amount of improvement, and the results now obtained already compare very favourably with the earlier and cruder experiments. Apart from the lack of variety in tone, which was a patent defect of those earlier essays, there was another and more serious disadvantage, arising from a certain rottenness and insecurity in the lines themselves. This arose partly from the employment of paper unfitted for the purpose, and partly from an uneven biting of the metal. Photography not only exaggerates the actual work of the draughtsman, but it caricatures the surface of the paper, and if this surface be rough and uneven, the lines, when they are transferred to the metal, lose sharpness and consistency. Mr. Dawson sought to overcome these defects by a process which he has described as typographic etching. Here the drawing was actually made upon a prepared plate in a manner partly corresponding to real etching, and the black in relief was afterwards obtained by a cast. But this process had not, after all, the advantage of rendering in facsimile an original drawing; and I now therefore pass to the consideration of the various modes now adopted for obtaining relief-blocks through the intervention of photography.

As the conductor of two artistic magazines, one of which is produced in France, I have had the opportunity of scrutinising very closely the results produced by the different professors of this kind of engraving both in England and abroad. The principal firms in France at the present time are the Messrs. Gillot, Messrs. Yves and Barret, and M. Petit, and very favourable examples of their skill are to be seen in the pages of *L'Art* and the *Gazette des Beaux-Arts*. The point in which they seem to me to surpass most of their rivals in this country lies in the ability to interpret drawings in charcoal and chalk, as well as drawings in pen and ink. It certainly appears, at first sight, a very remarkable gain to the resources of illustration to be able to print from a relief-block in such a way as to imitate the crumbling touch of a chalk drawing, and this has in some instances been very successfully accomplished. Very much, of course, depends upon the skill of the printer in handling these photographic blocks, as they undoubtedly demand more adroit handling than is bestowed upon the ordinary wood-block. The art of printing illustrated works is unquestion-

ably more widely understood in France than with ourselves, and to this cause we must attribute some part of the superiority which the French processes would seem to possess. In London there are, by comparison, only a limited number of printing firms which devote special attention to this class of work, and although the results obtained in these isolated cases are highly satisfactory, the production is, as a general rule, far more costly. But even the best of these French processes, aided and supported as they are by the greater skill and resource of the French printer, are scarcely superior to a process to which I shall specially draw your attention to-night. This process is the invention of a German gentleman, Mr. Henschel, who is a resident in this country, and who has kindly afforded me every facility for explaining to you the peculiar methods of his work. There are many others of the same kind, and based mainly upon the same principles; but as there are considerable differences in detail, I have thought it best to-night to confine myself to the description of a single example. The faults common to nearly all the processes to which I have referred are, as I have said, of two kinds. In the first place, the line which was firm and steady in the original drawing is apt to exhibit a certain rottenness when it reappears upon the block, and further, the block commonly fails to distinguish successfully between lines of varying strength. It may even be said that where the original drawing has passages of delicate execution, even though expressed in line, these delicate parts disappear altogether, and the printed impression from the block is, by comparison, crude and coarse in effect. In order to understand why this should be so, it will be necessary to explain the different stages in the production of one of these blocks. The first requisite, common to every process, consists in a good clear negative from the drawing which has to be reproduced; but the real difficulty begins when it is sought to transfer this negative on to the metal. Now, this has usually been accomplished by means of transfer paper, such as has long been used by lithographers. This transfer paper is so treated as to be sensitive to the action of light, and an ordinary photographic print is then taken upon it, which is afterwards treated with lithographic printing ink and transferred to the smooth surface of the zinc plate. But the conditions which make it necessary to employ this transfer paper are unfavourable to the photographer. In order to secure detail, the light must act through the transfer substance, and fix the image to the paper itself, but unfortunately the exposure required to effect this result intensifies the darker parts of the picture to an exaggerated degree. The engraver has therefore to choose between two evils. Either the black parts of the picture will be too strong, or the lighter and more delicate portions will be lost altogether; for unless the light has penetrated the transfer substance and fixed the image to the paper, these delicate features will inevitably be washed away with the transfer material and never reach the metal at all. And this, in fact, is what usually happens. If an ordinary process block is compared with an ordinary drawing of any subtlety or refinement, it will be found not merely that the lines are rotten, but that many finer lines which gave beauty to the drawing have no existence in the block at all. And there is yet a further disadvantage incidental to the usual mode of procedure. The transfer to the metal can only be effected by pressure, and the pressure has the inevitable result of destroying the delicate work, and rendering the lines indistinguishable. When the image, with whatever loss it has suffered by the way, has been transferred to the metal plate, it is treated very much in the manner already described in connection with lithography. The surface is covered with gum, so as to resist and repel the printer's ink, which is now applied by the lithographic roller, and which only adheres to those parts where the transfer ink has been impressed. The plate so inked and prepared is now ready for the acid bath. It might, if we chose, be treated as a lithograph, and impressions might be taken from it just as they are taken from the surface of the stone. But our object now is to produce a block in relief which shall be adapted for printing in an ordinary press with movable type, and with this purpose in view, the next thing to be done is to bite away all those portions of the plate which are not occupied by the lines of the drawing. The zinc plate is therefore placed in the acid bath in the same manner as an etching, only that here the process is reversed, and instead of eating into the lines of the drawing, the acid eats away all those portions which surround these lines, which are themselves protected from chemical action by the ink which covers them. As the biting gets deeper, care is needed in order to protect the sides as well as the upper surface of these lines, otherwise they would be undermined, and would then fall away; and for this purpose the ink has to be applied again and again during successive stages of the biting.

The method I have been describing is the ordinary method of producing a process block. It may differ in detail, or according to the varying systems of different inventors, but the principle is the same in all, and it is subject in all to the peculiar disadvantages I have pointed out. By way of removing some of these disadvantages, Mr. Henschel, and others who have worked in the same direction, have found a means of doing away altogether with the ordinary transfer process, and of therefore avoiding the grave defects which it involves. Instead of taking a print from the negative upon transfer paper, he takes it upon a composition of his own



preparation, which retains all the most delicate features of the photograph. The print so obtained, which resembles a carbon print, and has the same quality of relief, is then laid with its face downwards upon the metal plate, and is then developed; and when this development is complete the paper to which the composition is attached is removed and the composition itself is washed away, save only in those places where the action of the light has taken place and which remain attached to the plate. No pressure is needed in this mode of registering the picture upon the plate, and therefore none of the finer work is filled up or destroyed. And again it may be remarked, that when he has once got the picture impressed upon the plate, it is at once in a condition to be treated by the acid. The composition itself, in the earlier stages of the biting, suffices to protect the drawing from the action of the acid. Though it is not greasy, like the printer's ink, it has chemical properties which serve equally for the purpose, and the strong printer's ink is only applied at a later stage.

In the presence of improvements like these it would be rash to declare that photographic processes have even yet reached the point of full development. Every day brings some new element of refinement, and if the progress in the future is to be measured by that which has been achieved in the past, it is more than probable that the craft of the engraver will be almost entirely superseded. Nor even if this should be the ultimate result of the alliance between science and art, would there be any great cause for regret. As to wood engraving, it has been made sufficiently clear, by our brief examination of its history, that it has never ranked higher than art of reproduction. With one single exception, it has never been used as a means of independent expression, and as the efforts of all the best engravers have been directed to the faithful reproduction of an original drawing, art will suffer no real loss should this same result be achieved by purely mechanical means. But it will then more than ever become the duty of the original artist to fit his work to its destination, and to consider, when he is engaged upon the illustration of a printed volume, what is the style of execution that will give the happiest expression to his ideas. With no intermediate craft between himself and the printer, he will have no excuse for employing inappropriate material, or for cumbering the printed page with work that displays an excess of elaboration.

### SCOTTISH ARCHÆOLOGY.

THE fifth of Dr. Anderson's course of lectures on "Scotland in Pagan Times" treated of chambered cairns in Argyre, Orkney, and Inverness. It was said that in 1871 Dr. R. Angus Smith, Manchester, explored a large chambered cairn at Achnacree, near Loch Etive, Argyshire. In form it was approximately circular, 75 feet in diameter, and rising to a height of 15 feet in the centre. There were traces of an outer ring formed by a trench and embankment round it, about 135 feet in diameter. The entrance passage was about 28 feet long, 3½ feet high, and 2 feet wide. The chambered interior to which it led resembled that of the Caithness cairns in being triply divided, but differed in the manner of the division, each of the three parts forming a separately roofed and walled chamber, the second entering by a doorway with a raised sill in the back of the first, and the third entering similarly from the back of the second. The floors of the chambers were covered with stones strewed loosely about, and in the loose soil of the floor were found fragments of several urns of peculiar form. One of these—the most entire—measured 7 inches in diameter and 4 in depth. It was bowl-shaped and rounded at the base to a globular form, the upper part showing a broad flattened rim slightly bevelled outwardly and recurved below. It was formed of a fine dark-coloured paste, close in texture, and hard-baked. It thus differed entirely in form, texture, colour, and quality from the urns of the bronze age, which were of a reddish paste, loose in texture, coarse-grained, and slightly baked. It differed from them also in being destitute of surface ornamentation. But the most striking difference lay in its difference of form—its globular bottom and broadened rim recurving below. Portions of another urn of similar form and character were found. There were no indications of cremation, and though no remains of unburnt bodies were discovered, the presumption was that the interments were unburnt, both on account of the form of the urns and the absence of burnt bones, which were almost indestructible. Dr. Anderson then described the cairns at Largie, near Kilmartin, and at Kilchean, also in Argyshire, and showed that in this group of Argyshire cairns they recognised the same features that gave character to the Caithness group, but with certain differences. They were chambered cairns, the chamber was subdivided into compartments, the roof was partly formed by vaulting and partly by flat slabs, and in one case it was wholly flat. The contents were burials after cremation, and in two of the three cases they were accompanied by urns of a dark-coloured paste, differing in form and character from those of the bronze age. In the third case the urn was of red paste, and the chamber exhibited a transitional form, inasmuch as it did not possess the vaulted roof which was characteristic of the typical group, but exhibited

a cist-like form, which was the form characteristic of the bronze-age cairns in Scotland. No trace of bronze, however, was present in any of them, and when implements were found with the interments they were merely of chipped flint. Another group of cairns of a singularly interesting character was found in the north of Caithness. The best known of the group was the chambered mound of Maeshow, nearly a mile east from the great stone circle of Stennis, on the opposite side of the Loch of Stennis. After describing the character of this structure and the interior dimensions, Dr. Anderson said that there were indications in the chamber which led to the conclusion that it had been broken into, probably in the hope of finding treasure, in the twelfth century. Within the range of from 3 feet to 11 feet from the floor the walls were thickly covered with runic inscriptions, comprising in the aggregate more than 900 letters. The forms of the letters of which the inscriptions were composed were those of the later variety of Scandinavian runes, which Professor Munch states are never older than A.D. 1100. The majority of the inscriptions were such as men seeking the shelter or concealment of the broken chamber might scribble from mere idleness. One stated that "Thatie the Viking came here to weary." Others consisted simply of a man's name with the formula carved, as "Hernend Hardane carved these runes." But one of the longer inscriptions told what was thought of the origin of the mound in the twelfth century by its Scandinavian visitors. Their tradition was that it was Lodbrok's sorcery hall. Ragnar Lodbrok was a well-known hero of the mythical poetry and romantic legends of Scandinavia. The people therefore who gave it this fabulous origin could have known nothing of its history. But there was another inscription of greater value, because it supplied the information of the breaking open of the mound. It stated that the larsalafarer broke open the Orkahang in the lifetime of the blessed Earl (Roguvald, who died in 1158), and that there was much treasure hidden in it; while another inscription stated that the treasure had been carried away before the Jerusalem men broke the mound open. Having described the structural peculiarities of the chambered cairn on the Holm of Papa Westray, Dr. Anderson said that in this Orkney group of chambered cairns we had the same essential characteristics as were exhibited by the groups which had been described on the mainland of Scotland. There was a typical relationship with strong local differentiation in each of the groups, so that while the essential characteristics remained the same, the Orkney group, the Caithness group, and the Argyshire group had each a special character of its own. Another group of cairn structures of a very remarkable character was situated in the little plain of Clova, on the edge of Culoden Moor, within a few miles of Inverness. Like all the others, they possess a definite internal outline and a regularly constructed interior chamber and passage; but, unlike any of the others, there was no subdivision of the internal chamber, and they presented an external feature which was not present among the groups of similar structures peculiar to Orkney, Caithness, and Argyre—namely, the addition of a ring of standing stones erected outside the periphery of the cairn. They had thus, again, reached the point in the investigation at which we found the stone circle and the chambered cairn united as a composite structure. But here the ring of standing stones was obviously an adjunct to the cairn which contained the burials within its chamber. From the descriptions that had been given in this and the previous lecture, it was clear that all these cairns, however much they might differ from each other in their structural details, belonged to one type of sepulchral structure, differing from all other types that were present in the same area—(1) in the possession of an interior chamber accessible by a passage; and (2) in the possession of a definite external form, which was structurally defined. In speaking of them he had called them cairns with respect to their present appearance, but with respect to their essential characteristics it had been demonstrated that they were in reality the ruins of buildings that were distinctly structural and architectural in character and conception. The system of their structure and design was a system that produced a building with outside and inside, with roofs and floors, external and internal doorways, partitions, and passages. A just conception of these features of their character and of their significance was only attained with difficulty, and after investigation, comparison, and reflection. But their enormous magnitude was a feature of their character which gave an instantaneous impression of energy and power, and the obvious fact that they were houses of the dead instinctively challenged our respect for their builders. They were men who were in their stone age, but it was plain that they were not on that account inferior in capacity and culture to the men of the bronze or iron ages, in so far as capacity might be indicated by the construction of cairns, or culture signified by an attitude of mind which regarded the perpetuation of the memory and honour of their ancestral dead.

The subject of the sixth and concluding lecture of the course was "The Culture and Civilisation of the Stone Age in Scotland." Dr. Anderson said that, as he had before had occasion to remark of the bronze age, there was no vestige of a dwelling or of a defensive structure known in Scotland which could be proved by evidence to have been the work of the men of the stone age. It was to their burial-places that we must therefore look as the chief sources of the materials which might disclose the quality of the



culture and the pattern of the civilisation existing among them. These materials were not abundant, but there were others which were more abundant, and whose testimony, though less direct and circumstantial, was not the less relevant to the purpose of their investigation. They were rarely found in hoards or groups. By far the larger number had been found casually in ploughing, in draining, or in excavations in peat mosses, in the beds of rivers, and the margins of lochs, or in sandy wastes by the sea-shore. He pointed out that stone axes and moulds for casting spear-heads of bronze had been found together at Campbeistown, Argyshire; and that instances of stone implements occurring in groups had been found in Aberdeenshire; at Dunmore, Glenshee; at Daviot, Inverness-shire; at Tingwall, in Shetland; and at Fochabers. These weapons served the double purpose of tools and weapons. Speaking of the method of hafting and the form of the typical stone axe, the lecturer said that its specialty of form and fineness of finish were indications of culture, while the perforated battle-axes of stone were characterised by a fineness of finish and decoration which exhibited special skill and taste in their manufacture, and afforded evidence of the capacity and culture of their makers.

The lecturer next described the implements and weapons which were not polished but finished by chipping, and also the spear and arrow heads, remarking that some of the processes of their manufacture were still a mystery to modern science, the production of ripple-flaking, for example, being pronounced by all who had tried it as simply impossible. Reviewing the whole phenomena of the stone age, as these were manifested in Scotland, we found them affording evidences of capacity and culture in the individual associated with evidences of civilisation in the community. We found their weapons and ornaments fashioned in forms that combined beauty of outline with symmetry and grace of proportion. We found the workmanship of the best examples faultless, the polish perfect, and the edge as regular and finely drawn from the face of the instrument as it was possible to make it with the aid of machinery and scientific appliances. The application of intellect and energy to the perfection of the art of working in stone was effected in directions that were different from those adopted by workers in metals, and therefore the culture of the lapidary was a culture which was not the same as the culture of the founder or the smith. But it would be manifestly absurd to say that the application of intellect and handicraft to the perfection of an art was culture when it was directed to one material, and was not culture when it was directed to another—that culture might be manifested in bronze, iron, and silver and gold, but none in bone or ivory, or jet or stone. In point of fact, we found that in the stone age there were certain varieties of implements and weapons which were roughly made, and certain other varieties which were finely made and carefully finished, and that the same thing was also true of certain examples of the same variety. This differentiation was in itself evidence of an activity of intellect which discriminated between what was needful and what was ornamental, and, having accomplished what was needful, was not content with that, but proceeded to the knowledge of conditions and the achievement of results which lay beyond the limits of utilitarian application in the region of æsthetic culture. It would be equally absurd to say that the application of intellect and experience to the perfection of an art was culture when it was directed to one method of operation, and was not culture when it was directed to another method—in other words, that it was culture which was manifested in the working of stone by grinding, and that it was not culture which was manifested in the working of the same material by chipping. In the finer forms of these chipped implements it was manifest that their rudeness was the result of processes carefully adapted to the properties of the material, and performed with a dexterity and a precision only to be acquired by practice and experience. That their surfaces were always unsmoothed, while other implements in the same material were finely polished, was evidence that the absence of polish in them was the result of intention and not the result of incapacity. And that this abstention from all effort to produce a finer finish of surface and outline than that which resulted from the merely constructional process ought rather to be recommended as a merit than censured as a defect in the workman's culture seemed plain from the fact that, whether practically or æsthetically considered, the form thus finished possessed a character of fitness and beauty which was universally acknowledged as most admirable. This character was the result of a single process perfected to a pitch of delicacy and refinement which is now unattainable. The process which they thus invented and perfected was the very process which scientific investigation had found to be the most suitable to the qualities of the material which they employed. In all these manifestations of special knowledge and skill it was impossible to hold that there was not evidence of culture. It might be a culture which differed from the culture of the bronze age, as the bronze age culture differed from that of the iron age; but whatever might be the amount of its difference from these or from existing varieties of culture, it was impossible to conclude that such manifestations as these did not constitute evidence which was relevant and sufficient to imply the existence of culture among individual members of stone age communities. Again, when we considered the aggregate of individuals in whom this culture existed, we found them, whether

as families, clans, or tribal communities, possessing organisations sufficient for the construction of works of enormous magnitude, and exhibiting in their construction a common agreement or public feeling strong enough to control the general expression of form and character of these works over an area so wide as from Caithness to Cornwall. These vast sepulchral constructions, which were necessarily the work of aggregates, were in their nature and significance essentially evidences of civilisation. The manner of its expression was doubtless different from that which now prevailed. The man who now subscribes his guinea to the public memorial of a leading citizen removed by death would then have performed the same duty by adding stones to his cairn. But it was the outward form of the act alone which differed: its inward significance remained the same. This man of the stone age, whose culture and civilisation were thus made dimly visible to us by the relics of his life and the memorials of his dead, was the typical representative of primeval man in Scotland. There was no evidence of the existence in the Scottish area of any representative type of man of higher antiquity or of lower culture than this. It was true that we possessed no means of converting the significance of these early manifestations into equivalents of the culture and civilisation which now existed; but if it be also true, as all experience showed us that it was true, that the systems of the present gave birth to those of the future, and were themselves begotten of the past, it followed that the early culture and civilisation were but the younger stages of those which now existed; and thus regarding them, he could not but conclude that they were the younger stages of the highest, as well as the lowest, of the modern forms.

Looking back over the way they had traversed, and having regard both to the manner and to the results of the investigation, he might say that he would have failed in one of its principal objects if it had not been demonstrated that it might be possible, from purely scientific materials, by purely scientific methods, to construct a logical, though not a chronological, history of culture and civilisation within a given area sufficiently wide to comprehend a series of representative types—that the logical history thus established by archæology dealt with the succession of types and stages of culture, but not with the determination of dates and epochs, which, in their very nature, were incapable of being extracted from its materials, and lay wholly in the province of chronological history, because they were attainable only through the medium of record—that the historic and pre-historic stages of human existence within a given area did not differ necessarily in the essential nature of their conditions and phenomena, but only in the manner in which these conditions and phenomena were presented to our intelligence—that the ascertained or recorded conditions and phenomena of man's existence in one region could not be taken as revealing the unascertained or unrecorded conditions and phenomena of his existence in another region, and that these must be determined for a wide series and separate areas before there could exist a scientific basis for the inductions of comparative archæology. If this had been successfully demonstrated, the method of the demonstration would also have disclosed the paramount importance of form and character for the determination of type, and the significance of systems of ornament as affording indications of the conditions of culture by their character, and determining the sequence of these conditions by their development. The disclosure of that importance and significance would also have shown that it might be possible to deal with the ornament of the pre-historic ages as an index of culture in much the same manner as the student of culture might deal with language and literature as supplying materials for his deductions with respect to the historic period, because it had been found that in thus dealing with the decoration of objects that were decorated, analysing the elements of which the ornament was composed, observing their various combinations, and deducting from the manner and results of these combinations the order of the development of the successive systems of ornamentation, the sequences of the systems were seen to follow the same order as the sequences of the forms and materials to which the decoration was applied. But most of all he hoped it might have been made clear that it was not the knowledge of the various dates of the different specimens, but the knowledge of their types; not the knowledge of their precise uses, but of their precise areas; not the knowledge of the measure of antiquity that might belong to them, but of the quality of the culture they indicated, that were the primary objects of their investigation. Besides these more general indications, it might have become evident to those who had followed the whole of the four courses of lectures, that, taken together, they were parts of one special demonstration, the total outcome of which was that Scotland had an archæology disclosing a series of manifestations of special forms of culture and phases of civilisation peculiar to her own area, and that she must therefore of necessity create and maintain her own school of investigation.

**Llanrhaidr.**—The ancient parish church of Llanrhaidr-yn-Mochnant, Montgomeryshire, has been reopened, after having been closed nearly four years for restoration. The work has been done from the designs of Mr. W. H. Spaul, of Oswestry. The contractors were Messrs. W. & G. Thomas, of Oswestry.



## NOTES AND COMMENTS.

AT the last meeting of the Académie des Inscriptions et Belles-Lettres M. FERDINAND DELAUNAY, who has just paid a lengthy visit to the excavations that have been carried out for nearly two years past by the Père DE LA CROIX at Saunay, read a paper on the subject, and exhibited some drawings illustrative of the important discoveries that have been made. His description of the hypocaust shows it to have been constructed on quite as grand a scale as those found at Pompeii. It is a vast circular furnace; the thick vaults, built of concrete blocks, are supported upon pillars of broken tiles and cement. Above the vault is a thick layer of cement, in which is laid down a flooring of Dissais stone, forming the bottom of the piscina, which is circular, and 1<sup>m</sup> 40<sup>c</sup> deep. The fire, or rather the burning gases, after heating the walls and vault of the furnace, passed through arched openings into a circular flue running right round the masonry of the piscina, so that the latter should be entirely enveloped in flame or hot air. The Commission of Historic Monuments has voted the adoption of M. LISCH's special report, which recommends the immediate acquisition by the State of all the area explored by Père DE LA CROIX. As there are several owners on the land, the Government will probably proceed by way of expropriation.

It is not often that Mr. RUSKIN asks for a grant from the public, and his appeal for funds to purchase some of the Hamilton manuscripts ought to have been enough to suggest the importance of securing the whole collection. Mr. RUSKIN was not supported, and now it has been revealed that the Prussian Government have purchased the whole of the manuscripts for 75,000*l*. Some will say that little advantage could arise to this country from the possession of the collection. The works would not of course be of equal value with a common encyclopædia for reference, and the illuminations would hardly serve for patterns for textiles. But it is not in this light that the Germans look at the relics of mediæval scholars which they have carried off from the richest nation in the world. They esteem the manuscripts simply as treasures which are invaluable in illustrating the history of European art and literature.

It has for many years been the rule of the French Government to make considerable purchases of paintings, sculptures, &c., from among the works exhibited at the annual Paris Salon for the provincial art collections. The lately-appointed Director-General of Fine Arts has just announced his intention of entirely changing the principle upon which the distribution of these treasures among the various local museums has hitherto been effected. M. PAUL MANTZ is of opinion that every locality possessed of a collection should endeavour to make of it, by the quality and artistic value of the works it contains, a fruitful centre of art education for the inhabitants, as well as an attraction to foreign visitors, and thus from every point of view a source of prosperity to the town. He is therefore desirous of favouring especially those municipal museums which have hitherto missed their fair share of the Governmental gifts, and are rich only in copies and second-class works. While acting upon this principle, he will, on the other hand, however, insist that the municipalities shall augment the yearly sum devoted to the keeping up and development of their art collections in proportion as these increase in importance—thanks to the intervention of the State—and this under penalty of suppression of all Government aid. As for those towns that already possess large and valuable galleries, such as Lille, Lyons, &c., the Director-General purposes henceforth to regulate his conduct towards them in accordance with the sacrifices they themselves make in adding to and perfecting their collections. This new plan of distributing State patronage meets with general approval, and must contribute greatly to raise the level of the public taste in art matters throughout the country.

THE competition in Christmas cards this year promises to be more intense than ever. MESSRS. HILDESHEIMER & FAULKNER, who are the first to appear, have issued a series which it will be difficult to surpass. It will be remembered that this firm offered an immense sum for original designs, and left the selection to some of the members of the Royal Academy. As was to be anticipated, an immense number of excellent designs

were in consequence obtained. The premiated figure subjects, landscapes, and flower pieces are very beautiful, but it must be admitted that many of the designs which were selected by the firm are more appropriate for Christmas. MESSRS. HILDESHEIMER & FAULKNER have also been able to reproduce some paintings of flowers by Mr. MUCKLEY which are vastly superior in style to the work that is generally copied. Altogether the collection is a remarkable example of ability and enterprise.

A FINE collection of pictures has been bequeathed to the Yorkshire Fine Art Institution at York by the late Mr. JOHN BURTON. Among the pictures are the following:—*Rembrandt in his Studio*, by Sir JOHN GILBERT, R.A.; *Buying the Wedding Gown*, by DYKEMAN; a landscape by W. MÜLLER; *Highland Sheep*, by R. ANSDALL, R.A.; *The Volunteers*, by J. D. HARDY; *Hogarth Painting the Portrait of Captain Coram*, by E. M. WARD, R.A.; *The Harvest Cradle*, by J. LINNELL; *Collecting the Offering in the Scotch Kirk*, by J. PHILLIP, R.A.; *The Mountain Spring*, by F. R. PICKERSGILL, R.A.; *The Three Orphans*, by J. D. HARDY; *Cattle Piece*, by Mr. SIDNEY COOPER, R.A.; and a landscape by the late CLARKSON STANFIELD, R.A. One of the conditions of the bequest is that the pictures are to be placed in a special gallery to be named after the donor.

AT a time when communication across the Thames below London Bridge is receiving attention it may be interesting to note that more than fifty years ago the late Mr. GEORGE DANCE, the City Architect, prepared a design for a bridge with a double roadway and drawbridges. It was not then adopted on account of the cost. Mr. DANCE had a large oil painting prepared of his bridge, which, with other drawings, is now to be seen at his grandson's house in Torquay.

THE work of demolishing the ruins of the Tuileries Palace is meeting with a considerable and unexpected amount of delay. The matter was brought before the last meeting of the Commission of Historical Monuments, with a view to deciding upon the best measures to be taken to preserve those portions of the building which are interesting from their historical associations or artistic beauty. One of the members, M. BRUYÈRE, submitted a project whereby the ruins should be removed and re-erected intact on the Pré-Catalan. After a long discussion it was, however, decided, upon the proposition of M. DU SOMMERARD, that a committee of the body, with the aid of M. GARNIER, the architect of the new building that is to be erected on the site, should be appointed to make a choice of the fragments to be preserved. The parts thus chosen will be carefully deposited in the central court, and the Commission will hereafter decide what is to be done with them. For this purpose a new credit will have to be obtained from the Ministry of Fine Arts, for the sum of 50,000 francs voted by the Chambers will be more than absorbed in the demolition. Here, moreover, the chief difficulty arises, for owing to the right taken by the State of reserving to itself a portion of the materials, no contractor can be found to undertake the work; so that it is probable the conditions, as at present laid down, will have to be altered.


THE network of lanes and alleys in the neighbourhood of the New Law Courts will become unbearable when the buildings are open. There are few public buildings in London having worse approaches. It is proposed to remove Holywell Street in order to improve one western approach to the Courts, but this will be inadequate, for lawyers, clients, and witnesses will come from all parts of the metropolis. Mr. C. F. HAYWARD has prepared a plan which would amend the defects in one direction at least. He proposes the construction of a street which would connect Holborn and the Strand—the two great lines of thoroughfare. Starting in Great Queen Street, opposite Little Queen Street, it would run in a straight line to the Sardinian Chapel, and thence by a convenient curve to a "circuit" which would be on the site of the Clare Market rookeries. One branch would lead to the Strand opposite St. Clement's Danes Church, and another would form a continuation of Newcastle Street. With the exception of a couple of printing offices and a vestry-hall, the property along the route is about the worst in the district, and it would be a blessing if it were removed. The advantages of Mr. HAYWARD's project are so apparent we hope that the Government will take it into consideration.









BEECHCROFT, NORBITON PARK, SURREY.  T. LOCKWOOD HEWARD ARCHITECT









Gardener's Cottage at DOWNES for COLONEL BULLER V.C., C.B., CMG., *E.H. Harbottle, Architect.*

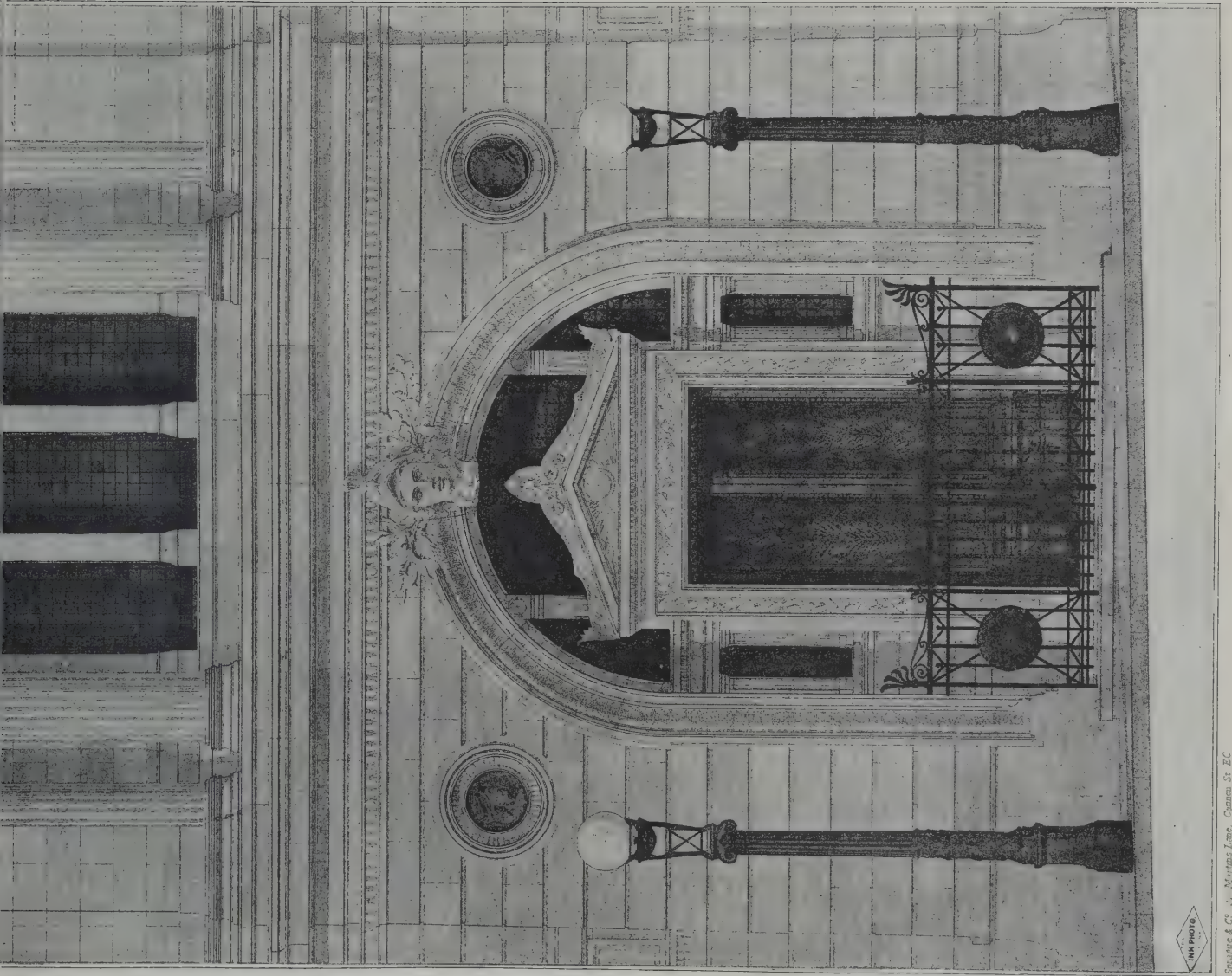












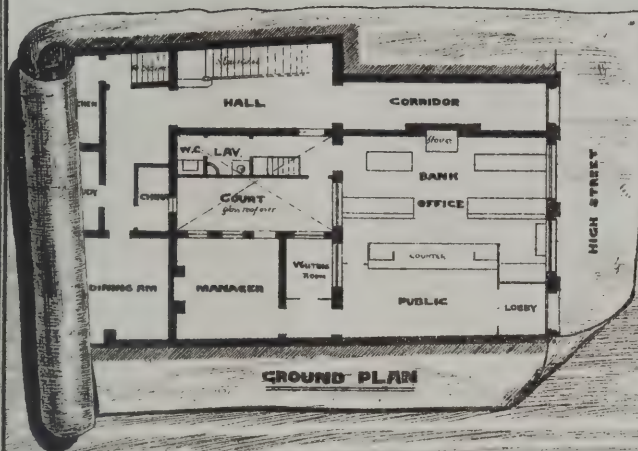
Spalding & Co. 4, Market Lane, Glasgow St. 2C.

CENTRE PORTION OF THE GLASGOW INSTITUTE OF FINE ARTS.  
JOHN J. BURNET, ARCHT.









New Premises Bedford for the  
London & County Banking Company:

USHER AND ANTHONY  
ARCHITECTS  
BEDFORD











KENT HATCH, WESTERHAM.  
M. P. MACARTNEY, ARCHT.







## ILLUSTRATIONS.

CENTRAL PORTION OF THE GLASGOW INSTITUTE OF FINE ARTS.

THIS illustration is a reproduction by the ink-photo process of a drawing by Mr. JOHN JAMES BURNET which was exhibited at the Royal Academy. It shows part of a building which visitors to Glasgow rarely fail to admire, for the Institute is one of the best examples of modern architecture in that city.

THE LONDON AND COUNTY BANKING COMPANY, LIMITED:  
BEDFORD BRANCH.

THIS building, which is just completed, occupies a prominent position in the High Street near to the Post Office, and comprises the business premises and manager's residence. The bank office is a handsome room, 28 feet by 28 feet and 14 feet 6 inches high, well lighted and ventilated. Adjoining it is the manager's room and a waiting-room opening on to a glazed quadrangle, including the minor offices and a way of approach to the strong-room and basement, and likewise to the manager's residence, which also has a private approach from the High Street. The materials of the structure are local brick faced with Fareham and Red Mansfield and Corse Hill stone masonry. The roofs are covered with Westmoreland slates. The joiners' work in the interior is of selected red deal and pitch pine, and in the exterior of oak wood; the bank fittings are in pitch pine, American walnut, and mahogany.

The builder was Mr. THOMAS SPENCER, and the bank fittings were furnished by Messrs. WELLS & Co., of Bedford; the whole of the works having been carried out in a most satisfactory manner, according to designs by Messrs. USHER & ANTHONY, architects, 9 St. Paul's Square, Bedford.

GARDENER'S COTTAGE AT DOWNES.

THE illustration shows a gardener's cottage recently erected at Downes, Devonshire, the seat of Colonel BULLER, V.C., C.B., C.M.G., from the designs of Mr. HARBOTTLE, A.R.I.B.A., of Exeter. It is built of red brick and tile, the colour of which and the outline of the cottage give it a picturesque appearance, seen through the beautiful old trees in one of the finest parks in Devonshire.

The work has been done by Colonel BULLER's estate workmen.

"KENT HATCH," WESTERHAM.

KENT HATCH, the residence of Mr. FREDK. SCORER, is situated at the junction of the Kent and Surrey Hills, above the town of Westerham. The house has been satisfactorily completed by the contractors, Messrs. FOSTER & DICKSEE, of Rugby, under Mr. M. ED. MACARTNEY as architect. The original drawing, from which our illustration was reproduced, was exhibited this year at the Royal Academy.

BEECH CROFT, NORBITON PARK.

THIS detached residence, standing in its own grounds, has been erected for Mr. F. SLEDGE, at Norbiton Park, New Malden district, Surrey. The house contains ten rooms, spacious entrance hall, and out-offices. The building is faced with picked red bricks and Bath stone dressings. The hall is paved with encaustic tiles, and lighted from behind the pediment with plate-glass roof in addition to the side lights. The entrance door and the upper parts of windows are glazed with cathedral glass in small squares of selected tints. The house is fitted with electric bells by Messrs. JOHNSON, of Wardour Street, W.C. The whole of the works have been carried out by Mr. JOSEPH SANDERS, builder, New Malden, under the superintendence and from the design of Mr. T. LOCKWOOD HEWARD, architect, 7 John Street, Bedford Row, at the entire cost of 750*l*. The mantelpieces and grates, which have given every satisfaction, were selected from the stock of Messrs. NEWTON & Co., Holborn Viaduct, E.C.

**Stockport.**—The parish church of St. Mary has been reopened after restoration, from the plans of Mr. Crowther, architect, of Manchester. Messrs. Cordingley & Stopford, of Manchester, were the contractors for the stonework; Mr. Roger Bateson, of Stockport, for the woodwork; Mr. William Booth, also of Stockport, for the painting and decorating; and Mr. Hardy, of Heaton Norris, for the removal and alteration of the organ. About 4,000*l* has been expended on the restoration.

## THE WORKS OF JOHN LEECH.

AT a recent *soirée* of the Manchester Literary Club a suggestion was made as to the desirability of obtaining by public subscription a selection of drawings by John Leech, similar in character to the beautiful series now in the South Kensington Museum, to be offered in the first instance to the Manchester Corporation for the permanent Art Gallery of the city. It was stated that the mayor was cordially in favour of the proposal. This suggestion was warmly approved, and a subscription list was opened in the room, to which about fifty of the gentlemen present at once contributed; and Mr. George Milner (the president of the club), Mr. Robert Crozier (president), Mr. William Percy (member), Mr. H. H. Hadfield (hon. secretary of the Manchester Academy of Fine Art), the Rev. W. A. O'Connor, Mr. Richard Smith, B.A., Mr. Councillor Rowley, and others promised to serve on any committee that might be appointed to carry the matter into effect. It is known that there still remain in the possession of the artist's sisters a large number of most valuable drawings, which these ladies desire to see worthily bestowed in public galleries. It is hoped that the public response to this effort may result in the purchase of the whole of the remaining works, in which case selections could be made and placed not only in Manchester, but in Liverpool, Leeds, Sheffield, Nottingham, and other large towns; and thus Mr. Ruskin's wish 'to see the collection divided, dated carefully, and selected portions placed in good light, in a quite permanent arrangement in each of our great towns,' be to some extent realised. Mr. Ruskin allows his name to appear on the committee, and has subscribed to the fund. In a letter which is appended to the circular Mr. Ruskin says: "It is with the greatest pleasure that I accept the honour of having my name placed on the committee for obtaining funds for the purchase of these drawings; and I trust that the respect of the English public for the gentle character of the master, and their gratitude for the amusement with which he has brightened so many of their days, will be expressed in the only way in which expression is yet possible, by due care and wise use of the precious possessions he has left to them." The provisional committee have received most encouraging offers of adhesion and assistance. In addition to Mr. Ruskin the following gentlemen have consented to join the committee and have promised subscriptions:—The Mayor of Manchester, Mr. John Tenniel, Mr. J. E. Boehm, R.A., Mr. George Bentley, of New Burlington Street, and Mr. Charles F. Adams, of Barkway, Hertfordshire.

## THE IPSWICH ART SCHOOL.

THE annual meeting of the Ipswich School of Art was held last week, when an address was delivered by Mr. Sparkes, headmaster of the Training School at South Kensington. He said that on examining the drawings of the students he saw there was a wholesome simplicity about them, especially the drawings from life. There was always a character about our designs which was peculiarly English, and which was, perhaps, more evident to foreigners than to ourselves. Our mediæval cathedrals at Salisbury, Durham, &c., &c., had a strong character about them, such as we saw in no country in the world but in England. The same might be said of our mediæval castles. In Suffolk there were many examples, the one at Framlingham being, probably, the finest of all. There was an essentially distinctive character about the large Tudor houses during the time which preceded Elizabeth's reign, and during that reign. At Hengrave and Helmingham were two magnificent specimens, not so much in their size as in their English character, which it was so necessary to preserve. In the town of Ipswich there were five examples of street architecture. The house in the Old Butter Market and the gables of St. Clement's, for instance, which he remembered seeing years ago, and which seemed to him at the time characteristic of Ipswich, Ipswich being a particularly characteristic English town. Wolsey's Gate was another example, nothing of the kind being seen in any other county. Mr. Sparkes spoke of the beautiful churches which were to be found in that part of the country, those at Cromer, Long Melford, and Lavenham standing alone in the country as fine village churches, peculiar not only in their size, but also in their style. The treatment was large, in the art sense of the word. At Bury St. Edmund's there was formerly a group of churches such as existed nowhere in the world. He referred to those at the Old Abbey with a magnificent Norman gate in the middle. No place on the Continent had anything like that magnificent group of churches. Speaking of the period which gave birth to such artists as Hogarth and Gainsborough, Mr. Sparkes pointed out that there was at the same time the growth of art in pottery and furniture, the latter beginning to be very highly appreciated in the present day. These things came to an end, and it was easy to understand why. The French Revolution, and with the wars that followed, and the struggle there was for national existence, there was no money and little inclination left for art productions, and a blank period came. There was no revival until the year 1851, when the great Exhibition was held, when we took stock of our deficiencies in this respect. It has often been said that in 1851 we found



ourselves absolutely behind in the race for industrial art. The consequence was we set to work in our peculiarly English manner. We took stock of our deficiency, and we devised a scheme to recover the ground we supposed that we had lost. To that scheme was, to a great extent, due the development of a system of art instruction. It was better conceived than carried out—so well conceived that other nations took it up. There was an awakening from our so-called want of taste and the extreme was immediately run into. French designs were to a great extent imported into this country, but it had almost entirely stopped now. The art schools were established by Parliament with Government money, but on the condition of only educating artisan students. These students, however, did not fill the schools. It was thus found necessary to open the schools to all who paid to enter, and hence the upper and middle classes were now taught, and to them it certainly proved a benefit. The amateurs, too, in these schools were the most useful instruments in advancing the interests of high art. Mr. Sparkes pointed out the necessity of students avoiding all wish to become painters before they even studied drawing. Amateurs were so apt to shrink from the drudgery, and many seemed to desire to begin at the end where great painters left off. That was the greatest difficulty that was experienced in dealing with amateurs. He pointed out the necessity of observing absolute accuracy. The French appeared unable to copy the traditional accuracy of the English, so necessary to the development of the amateur. There was frequently a great deal of unnecessary labour on the part of students from the want of accuracy. Instead of thoughtlessly putting the pencil to paper, and probably having to use the india-rubber frequently, the student should be painstaking, and before using his pencil think and deliberate, not troubling because the work was done more slowly. It was necessary for drawings to be as absolutely accurate as human beings could make them. Art in England was of a national character, as they in Suffolk might well understand when he referred to such names as Gainsborough and Constable—men who could scarcely be approached in their own line. Constable even disregarded picturesqueness for the sake of fact, and from him the French school of landscape painting had been formed. The French, however, he must confess, followed him in a most extraordinary manner. With regard to the Ipswich Fine Art School, it had added considerably to the number of artists in the county, and in speaking of Cotman and Symonds, he was speaking of men still remembered as pupils in that school, and who were now in town, coming to the front, and he felt no doubt would make their mark among the artists of the day at a very near future.

### TRURO CATHEDRAL.

A REPORT on the progress of the works at Truro Cathedral was presented to the Diocesan Conference which was held last week. According to it the committee had expended about 2,800*l.* beyond what they had in hand, but seeing they had the whole twelve months to collect that sum, they had not much to fear. By incurring that expenditure, too, they secured the munificent offer of Canon Phillpotts of 1,000*l.* and 500*l.* at a future time. They had also received the memorial fund of 1,000*l.* from Lord Robartes, and they hoped other memorial funds or legacies would come in to help them in their deficiency. Last year they had a deficiency of 1,300*l.*, and that was calculated upon the building of the choir division alone; and no allowance was made for necessary expenses, such as architect's commission. Now, they had only a deficiency of 2,863*l.*, not upon the choir division alone, but upon other features which they had authorised to be carried out, including the south aisle, which was to serve as the parish church of St. Mary, and the south transept. In regard to offertories, about which a question had been asked, the treasurer had given him a statement which showed that for this year the amount already returned as offertories within the diocese was 243*l.* 13*s.* 8*d.*; and elsewhere 101*l.* 4*s.* 7*d.*

The following report, dated October 5, from Mr. Pearson, R.A., was also read:—

"A few days ago I again visited the works at the cathedral, and it affords me much pleasure to report that they are progressing most satisfactorily. The north aisle of the choir is very nearly completed to its full height; it only wants its parapet to finish it. The east gable of the choir is carried up to the point of the lower tier of windows, and the ends of the aisles are as high as the side walls, and are therefore also nearly to their full height. The arcades dividing the choir from the aisles will in the course of a few days be all completed, and in less than a fortnight I hope that the string course over these arches, and which is at the level of the triforium floor, will be fixed. The other arcades are in a similar state of forwardness, and will in the course of this month be brought up to this triforium level. The two tower piers are less forward than the other features, but they will now be carried up to this same level. When the whole of the building has thus been carried up, there will then remain to be built the triforium and clerestory stages of the choir, with the remaining portion of the east gable end, the remaining portion of the two tower piers and

the arch over them, and the upper part of the ends and sides of the two eastern transepts; and then, when these works are finished (which I hope they may be by the summer of next year), the masonry may be said to be nearly completed, for there will then only remain to be put in the ribs and filling in of the groining, which is a work of no difficulty, and will not require an expenditure of much time."

It was resolved by the Conference not to proceed with the construction of the great transept until sufficient money had been secured.

### THE VENTILATION OF THE GUILDHALL.

ANY ordinary observer who has had the privilege of entering the Council Chamber at the Guildhall, London, even when devoid of occupants, would be almost sure to ask himself the question as to how the room was ventilated. It is one of those apartments that appears to strike the mind that a something more than can be seen is necessary for the healthful comfort of those whose civic duties compel them to pass a portion of their time in it, and if the stranger has had an opportunity of being present when the City parliament have been holding their debates, he would have soon found that the atmosphere was anything but inviting; and had he asked any of the officials, or even the members of the Council themselves, he would have heard dissatisfaction expressed on all hands, for it is notorious that, spite of different attempts to remedy it, including what we may term an elaborate system introduced no later than three years since, the room in which the City Fathers hold their conclaves has been one of the worst ventilated apartments for its size, as a public one, in the metropolis. We say "has been," for a new system of ventilation has recently been completed that promises to surpass all previous attempts to introduce fresh air and exhaust the vitiated, and one that after many severe tests has received the approbation of all concerned in the carrying out of the plan. Smarting under the annoyances they had long laboured under, the City Architect, by the direction of the Corporation of London, requested Messrs. Robert Boyle & Son, of Holborn Viaduct and Glasgow, whose success as ventilating engineers has become matter of world-wide notoriety, to submit to him a system of ventilation adapted to the requirements of the chamber, but on the conditions that it would only be accepted after exhaustive trials had proved to the City Architect and a committee that it was successful; and if not to their satisfaction every vestige of it was to be removed within a specified time, and everything made good, at Messrs. Boyle's expense.

Thus the contract was entered upon on the principle of "no cure, no pay." Confident in their system, the firm accepted the terms, and the guarantee, which was of a very stringent character, was drawn up by the Corporation themselves, and was of such a nature as would put Messrs. Boyle's system to a most severe and crucial test. In January last the chamber was handed over to them to commence operations, and as we have carefully watched the progress of the work, and were present only a few days since—it now having passed through the ordeals prepared for it—we have much pleasure in adding our testimony to its satisfactory results. It has received the approbation of the City Architect, the committee, and we may add of the public. Messrs. Boyle have had the privilege accorded them of inviting as many as they pleased to witness the results, and a large number of invitations were issued by them, in which they included those gentlemen they considered interested in the question of ventilation and competent to pass an opinion upon the work, and also competitors in their own profession, advocates of a totally different system. Amongst those who accepted the invitation were Dr. C. W. Siemens, Captain Douglas Galton, Professor Corfield, Captain McHardie (Home Office), Dr. Steele (Guy's Hospital), Mr. Ernest Hart, General Cotton, Mr. A. Billings, Mr. H. Currey, Mr. Alexander Graham, Dr. Sedgwick Saunders, Medical Officer of Health to the City of London, Dr. Lavies, Medical Officer of Health for Westminster, Mr. Thornhill, Mr. Butterfield, Messrs. Hanson, Griffith, Pugin, and Bruce, besides numerous other architects, civil engineers, and medical men.

The application of the system adopted may be described as follows:—Nine of Messrs. Boyle's patent self-acting air-pump ventilators are fixed on the top of iron shafts, standing at various heights above the roof, to clear them of obstruction. Four of these shafts, viz. two at each of the chamber, are of 13-inch diameter, branching off a little above the ceiling into two 10-inch pipes, communicating with openings in the ceiling 2 feet in diameter, concealed by means of ornamental centre flowers, or ceiling plates. On the top of each shaft is fixed a 2-foot air-pump ventilator. At the east end of the chamber a shaft 18 inches in diameter is carried through the roof, having a 30-inch ventilator on its top. This shaft expands at the bottom to 2 feet 6 inches by 2 feet 3 inches, covering an opening of the same dimensions in the ceiling. At the west end, a shaft 30½ inches by 20½ is brought into requisition, and is carried up a considerable height to the top of an adjoining building, surmounted with a 3-foot ventilator. A shaft



16 inches diameter, that is connected with the large "sunlight" gas-burner in the lantern over the central dome of the chamber, is also run into this shaft, the ventilation of the body of the room being partially effected by this means. On the top of the outer casing of the lantern three 13-inch shafts are fixed at equidistant spaces, and crowned with 20-inch ventilators, the shaft communicating with openings in the interior of the lantern by means of expanded iron hoppers, and these complete the arrangements for the extraction of the vitiated air from the chamber. It may be mentioned *en passant* that a portion of these shafts formed part of the old system of so-called ventilation, and were then surmounted with revolving cowls.

For the supply of fresh air to the chamber Messrs. Boyle have turned to account, with certain alterations, some of the modes of ingress they found existing when the work was entrusted to them, and that were then of but little use. On the south side of the chamber four vertical air tubes or brackets are fixed against the walls, two of these being of the size of 2 feet by 2½ inches by 3 feet, the other two, which are placed a little higher up the wall, measuring 18 inches by 4 inches by 2 feet. The tubes communicate direct with the outer atmosphere by holes cut through the walls and covered with cast-iron gratings. The air inlets are fitted with Messrs. Boyle's patent heaters, which are now so generally known amongst the profession as to render description here unnecessary. These are, of course, added for the purpose of warming the incoming air to any temperature required as it enters the building. The north wall is similarly treated, with the addition of an extra tube at the end by the Lord Mayor's seat. At the public end of the chamber three more inlet tubes are fixed, similarly fitted with the air-warmers, while others amounting in the aggregate to sixteen, are fixed in other positions, completing the arrangements for the fresh air supply. We may add that an abundant quantity is admitted, and the tests have shown that the air can be warmed in cold weather to a temperature of from 60 deg. to 120 deg., thus entirely preventing cold draughts, the usual attendant on most methods of admitting cold air to a building where provision is not made for warming it.

Referring to the extraction of the vitiated air, it is not necessary to give the full table of results from January until the present time; we need only say that the average quantity withdrawn amounted to 500,000 cubic feet per hour, and that during the whole of the experiments, official and otherwise, not the slightest down-draught was experienced; had it been otherwise the conditions would not have been complied with, and the firm would have been called upon to remove their appliances, and their system would have been pronounced a failure, one of the principal conditions being that down-draughts should be entirely absent, and that a continuous and powerful up-draught should be maintained.

Previous to Messrs. Boyle undertaking this work great complaints had been made of the amount of draught always present in the chamber, but since the completion of their arrangements lighted candles have been placed in various parts of the room, the flame has been watched, and it has been clearly demonstrated that they were in all instances perfectly steady, showing that the draughts had ceased to exist.

After six months' practical experience, Mr. Horace Jones, city architect, and President of the Royal Institute of British Architects, has certified that all the conditions have been fulfilled, and that the ventilation is successful; and, as we before observed, this has been endorsed by the committee, and Messrs. Boyle have received their account. Thus another public building has been added to the long list of those that the firm have successfully ventilated.

The following letters have been received by Messrs. Boyle from Sir John Monckton, the Town Clerk of the City of London:—

Guildhall, E.C. : July 10, 1882.

DEAR SIRS,—I gladly give you the enclosed letter of introduction to my friend Mr. Whichcord, and hope that his high professional position may make it of use to you. You have the permission you ask to copy it for use elsewhere, for really I am personally grateful for the alleviation we now experience in the condition of the air we have to breathe for so many hours together.

Faithfully yours,

(Signed) JOHN B. MONCKTON.

Guildhall, E.C. : July 10, 1882.

MY DEAR WHICHCORD,—I am asked by Messrs. Boyle & Son to state my personal experience of the recent ventilation of the Council Chamber. I can do so in very few words. Until the present year I never knew what it was to leave the Guildhall on a "Common Council day" without a headache. In fact the palpable alteration for the better in the atmosphere, even on crowded days is very satisfactory, and it appears to me—a non-expert—that Messrs. Boyle's system is eminently valuable and practicable.

Yours very obediently,

(Signed) JOHN B. MONCKTON.

In addition, the officials of the Court and many members of the Council have personally thanked Messrs. Boyle for the benefits they have derived, from a healthful point of view, from the application of their system. From a large number of equally favourable letters received by the firm from independent sources we abstract the following from an eminent London physician and sanitarian, whose name for certain reasons is suppressed:—

"After thoroughly testing and examining your system of venti-

lation as applied to the Council Chamber of the Guildhall, I have great pleasure in being able to say that I am in every way satisfied with the result. It is, in my estimation, the most perfect system yet introduced, and I greatly doubt there being any room for improvement upon it. The fact of your appliances being entirely self-acting and having no movable parts liable to get out of order after having been placed is a great boon, as it renders any after-cost or attention unnecessary. During the time that I have devoted to testing your appliances I have always found them entirely free from down-draught, a feature I have not found in any other system, and which I opine to be of the greatest advantage, as it not only serves to ventilate the building more thoroughly, but furthermore maintains an even temperature therein, which no sudden change of weather can affect. My pursuits have rendered me practically acquainted with many systems of ventilation now in use, both automatic and otherwise, and after careful examination I have arrived at the conclusion that your system is not only the simplest but the most efficacious I have yet met with. This opinion is, in so far as the Council Chamber is concerned, also shared by some friends of mine who are members of the Council, and who pronounce the application of your process simply faultless."

As a result of Messrs. Boyle's success here and at the Custom House they have received orders for the ventilation of over 300 public buildings, the more recent being the Reform Club, Lloyd's Royal Exchange, Claremont, the residence of His Royal Highness Prince Leopold, New Royal Courts of Justice Chambers, the Imperial Mint, St. Petersburg, Portland Prison, Stonyhurst College, Royal Naval College, and Greenwich Hospital. It is also being applied to Mr. Gordon Bennett's steam yacht *Naumina*.

## THE GLASGOW INSTITUTE OF FINE ARTS.

THE annual general meeting of the members of the Glasgow Institute of the Fine Arts was held on Monday last. The twenty-first annual report stated that when the books were closed on August 31 the capital amounted to 17,310*l.* 16*s.* 11½*d.*, showing an increase for the year of 5,280*l.*, arising from the bequest of the late Mr. McGavin, and contributions from new members. During the year two exhibitions had been held, the Water Colour and the Black and White, in the autumn of 1881, and the usual spring exhibition in 1882. In the Black and White exhibition the high standard of excellence reached in the exhibition of 1880 was fully maintained, and the spring exhibition was also one of great merit. The amount obtained for season tickets, admission, &c., was 52*l.* in excess of 1881, and the expenses of both exhibitions were considerably lower than in previous years. There were 196 works, producing 6,244*l.*, sold at the spring exhibition, and 173 at the Black and White exhibition, producing 1,398*l.* There were now 419 members on the roll, made up of 15 private gentlemen, 250 merchants, 77 professional gentlemen, and 77 artists. The report concluded as follows:—"The Council must, as in previous years, impress upon their fellow-members the imperative necessity to the progress of the Institute of each member taking a personal interest in its operations and extension. The Institute has since its establishment done much, quite unaided by outside help, to further art education and improve art taste in Glasgow, and to enable it to persevere successfully in its career of usefulness the hearty co-operation of the members is earnestly requested. In other towns, such as Liverpool, Manchester, and Birmingham, art matters are yearly receiving increased attention, as their important bearing on the well-being of the community is being more clearly understood. To keep Glasgow from lagging behind, the Institute must have the cordial support of its own members and through them of the general public."

Mr. Reid, the chairman, said the report was so full and explicit that nothing fell to be added by him. He drew attention to the membership, which, for a city like Glasgow, was very small. It was for all members of the Institute to endeavour to add to the list by getting the names of gentlemen willing to join. The interests of the gentlemen who were not members of the Council were identical with those who were. The statement of accounts showed some little deficiency in their revenue. Of course they would understand that arose through the halls not being so fully let as in the previous year, and they had not drawn such a large sum for rent. It came to be a serious question for the Council to consider what was the best plan to adopt to bring the expenditure and revenue nearly equal. In letting the halls for exhibition purposes the Institute was no doubt carrying out the intention of the society, but of course there were some objections to this. If they invited foreign parties to come and exhibit works of art, it would tend in a great measure to curtail the sales made by local artists. By the exhibitions held during the preceding year the rent received was much larger than last year, when they confined themselves almost entirely to their own exhibitions and bazaars. It was clear that something would have to be done to improve matters. As regarded the expenditure, he was happy to say that as compared with the previous year it had been much less, their secretary



having been looking into the accounts and curtailing the expenses where it was possible to do so.

A letter was read from the Marquis of Bute, in which his Lordship declined to undertake the office of president. Sir Peter Coats was elected. Mr. James Duncan, of Benmore, and Mr. James King, of Levernholm, were elected vice-presidents. Mr. Reid was re-elected chairman of the Council. Messrs. William Carlaw, A. C. Holms, D. E. Outram, and Robert Ramsay were elected members of the Council.

The names of the gentlemen proposed as members of the Institute were then agreed to, and the chairman stated that forty-seven had been added to the roll. They wanted, however, to get a thousand names, and he did not see why they should not easily obtain that number in a city of about 800,000 inhabitants.

### ARBITRATION CASE.

THE award of Mr. T. Huskisson, the arbitrator in the case of *The Countess of Ossalinsky v. The Corporation of Manchester*, heard in August last in London and previously in October of last year, has been presented. The question was as to the value of the Armboth estate, situate on the banks of the Thirlmere, and required for the purposes of the proposed waterworks. The hearing of the case occupied about fourteen days.

In his award Mr. Huskisson fixes the value of the freehold lands at 47,120*l.*, and the value of the customary lands, &c., at 12,461*l.* In arriving at these valuations the arbitrator has considered certain stints as mere rights to take herbage. He puts an additional value of 1,728*l.* on the freehold stints in respect of any right they may give to the soil of the fells. He puts 960*l.* additional value on the customary stints in respect of any interest they may have in the soil of the fells. Again, he puts an additional sum of 2,000*l.* as the value of that portion of the bed of the lake which may be held to belong to the Countess as riparian owner. Then he puts 128*l.* as the value of certain stints which were not included in the notice to treat, and he puts 48*l.* as value to be added in respect of the right which these stints may be held to have in the soil. An addition of the several sums here mentioned gives a total awarded in favour of the Countess of 64,445*l.* But this does not cover the whole of the issues involved. The arbitrator says that the lands, &c., taken by themselves and in conjunction with other adjoining lands, are naturally and peculiarly adapted for collecting and storing water and for the construction of a reservoir, and that he has in his award taken into consideration the enhanced value of the lands by reason of this fitness, whilst he has not included any value in respect of this adaptability along with other lands for the same purposes. He submits a special case as to whether he ought to have allowed for this latter. If it should be held that he ought to have allowed for it, then he says further that if the title shows that the bed of the lake is part of the land of the Countess he awards 6,000*l.* for this extra matter. If the title shows that the bed does not form part of her land, then he awards 4,000*l.* The general result is that there is an absolute award in favour of the Countess of 64,445*l.*, and a contingent award as the result of a special case of 6,000*l.* or 4,000*l.* to be added, the difference depending on a question of title.

### ELECTRICAL ENGINEERING.

THE subject of the opening lecture of the session in the Engineering class of the University of Edinburgh was "Electrical Engineering." Professor Fleeming Jenkin said that, when closing the class last session, he had spoken of the desirability of having a course of lectures on electricity, and it appeared that it would not be very difficult to prepare a course which would be exceedingly useful to students in large cities. He found, however, that the development of the science was so great that it would be an exceedingly laborious matter to prepare a course on the subject without efficient apparatus; and after his visit to the Electrical Exhibition in London he became more and more convinced that the delivery of such a course without apparatus, and very expensive apparatus, would simply be time lost. Of the immense importance of lectures on electrical engineering he was more and more convinced, and he had come to the conclusion that a new chair was required for its proper teaching. The developments in the science could hardly be exaggerated, and while at one time scientific men were of opinion that the popular mind was expecting too much from electricity, he suspected that the general popular opinion was coming to be about right. The popular mind erred in supposing that electricity would supersede steam as a motive power. What had taken place was that engines were employed to produce electricity, and electricity afforded us the very best means yet discovered of distributing power. Electricity did not take the place of steam, but it took the place of cog-wheels, and of shafting and belting. It took the place of hydraulic machines. Instead of shafting, they had a wire from the engine to the machine that required to be driven. It was as a means of distributing power

that electricity had become so very important an agent in engineering work. In regard to electric lighting, the quality of colour and brightness seemed to him to be matters of exceedingly small importance. In these respects it seemed to be much like a slight change of fashion in dress, the newest style of coat being for a time preferred to the older. But there were numerous advantages to be gained in the carrying on of works which it was impossible to carry on by gaslight; while for domestic purposes with the incandescent light they had no bad air and very much less heat than from gas, and this was important from a sanitary point of view. After alluding to many of the uses to which electricity could be conveniently applied—such as the carving of stone, the hoisting of goods, and to farmwork—the lecturer referred to the importance of having technical classes, with suitable laboratories, for instruction in the principles of electric engineering. Touching on the subject of legislation in regard to electric lighting companies, he remarked that every possible obstruction seemed to be thrown in the way of these companies. This, however, might be attended with good in the long run, because electric lighting companies did not seem to be deterred in overcoming those legal difficulties. If anything was to be done at all in the way of studying electrical engineering in the University, it must be well done, and ample apparatus must be provided to enable the teachers in Edinburgh to give as good instruction as could be given in any other town in the kingdom.

### LANCASHIRE ART PATRONAGE.

THERE is a considerable colony of Manchester and Liverpool artists settled in Tal-y-Bont, a quiet and charming village between Conway and Llanrwst. A few weeks ago a gentleman from Blackburn was introduced to this happy family of artists by a Manchester man, and he gave every artist there a commission for a 20-guinea picture or drawing. The works were completed, and the gentleman advised about it. The artists met and rigged up a large outhouse belonging to Mr. Charles Potter, who is a kind of governor and leader down there. In this building the drawings and pictures were displayed, and the Blackburn gentleman was so pleased with the result that he at once paid the commission and bought some more drawings, notably two very good ones by Mr. Potter. This pleasant episode gave great pleasure to the group of artists at Tal-y-Bont, but it is doubtful whether they received as much gratification as the owner of the drawings.

### NOTES ON NOVELTIES.

#### New Draw-off Cock and Safety-Valve.

Our readers must be well acquainted with the troubles to which householders are too often subjected through the months of a severe winter in connection with the bursting of water-pipes through frost, and more particularly during the two winters previous to the last, when many serious, and in one or two instances fatal, accidents occurred from this cause, particularly when high-pressure boilers were in use. Several safety-valves were then brought prominently before us, and one of them, "Randall's," made by the firm of which we are about to speak, has been extensively used, and has answered its purpose remarkably well. We have now to call attention to a combined draw-off cock and safety-valve for a kitchen boiler, which will obviate the necessity of having the additional appliance fixed, and we doubt not prove even more reliable than when an independent safety-valve is fixed. This tap is the invention of Mr. S. B. Goslin, for many years connected with the old-established firm of John Warner & Sons, Crescent Foundry, Cripplegate. Its body or shell is formed with a diaphragm dividing the inlet or pressure side from the outlet, and through this diaphragm there is a passage, with a seating for the valve, by which the pressure is closed and opened. The valve is of the disc form, and its stem passes up into a spring-box which is capable of sliding in a direction to and from the diaphragm, in a quick barrel formed upon the shell or body. The spring box contains a coiled spring, which is sufficiently stiff not to yield to the ordinary pressure upon the valve, but it bears upon a disc upon the valve stem. A spindle carries the spring box at its end, and a screw thread upon the spindle works in a female screw in the body, or in a nut which is received into a recess provided in the cover of the guide barrel. Over the nut there is a stuffing-box to maintain a tight joint around the spindle. The latter is provided with a head handle, by which it may be turned to open and close the water passage. The distance to which the spindle can be screwed down is limited by stop nuts, which screw on to the exterior of the stuffing-box cover. The head or handle comes into contact with the stop when the handle has been screwed in far enough to bring the valve against its seat, but without further compressing the spring in the spring-box. When the spindle is turned in the contrary direction the spring-box is carried back away from the diaphragm, and the valve is withdrawn from the seat. Ample arrangement is made to enable the valve to rise



from its seat should an undue pressure accumulate; and the spring within the spring-box may be replaced by a weight or weights. Although the description we have given of this new appliance for safety may to the uninitiated appear somewhat complex, if one of the new cocks were in the hands of the reader, its arrangements would prove to be of the most simple character, and we anticipate its almost universal adoption when generally known.

## LEGAL.

### Sheriff Court, Falkirk.

#### MEASUREMENT OF TIMBER.

A case of some importance to timber-measurers has been decided by Sheriff Bell. The case arose out of a dispute between the Caledonian Railway Company and Mr. John Cook, timber-measurer, Grangemouth, as to a charge made by the latter for measuring fully 10,000 tons of deals and battens lying round Grangemouth Docks. There had been a fire in the Canal Office, which destroyed the books showing the quantities of timber on which storage dues were charged to the timber merchants; and the pursuer was employed, without any bargain as to price, to measure the timber. After being engaged five days at the work, he was stopped on account of the merchants offering to give all the information required. The pursuer charged for his statement 134*l.* 1*s.*, being at the rate of 3*d.* per load of 40 cubic feet. The defenders maintained that 10*l.* was ample remuneration, but offered 20*l.* judicially. A number of timber-measurers from the Clyde proved that their rates were the same as those charged by the pursuer. The Grangemouth merchants, on the other hand, maintained that there were no such rates known in Grangemouth, and that the defenders had offered ample remuneration for the work, which was so easy and simple that it was invariably done by their clerks. The Sheriff has allowed 45*l.*, being at the rates allowed by the Custom House for such work, with expenses, modified to three-fourths, as the pursuer had failed to sustain his claim fully.

### Court of Session, Edinburgh.

Before Lord LEE.

#### GARDEN *v.* BEATTIE & SONS.—DALY *v.* SAME.

##### EMPLOYERS' LIABILITY ACT.

The pursuers or plaintiffs in these were labourers who were employed by the defenders, who are builders in Edinburgh, in May last, in digging out the foundations for the site of a front wall of a new tenement that was to be erected in room of an old tenement in Advocates' Close, which had been condemned, and which had been taken down by the defenders. Instead of removing the stones of the old tenements from the ground, the defenders, before the pursuers were employed, had them piled in three heaps on the ground between where the side walls of the old tenements stood. It was alleged that several necessary precautions had been neglected by the defenders, or those for whom they are responsible, to see to the proper building and stability of the piles; and the piles endangered the safety of the workmen employed near them. The track for the foundation for the new wall passed close to the side of the central pile; and, in order to make sufficient room for the track of the foundation, some of the stones composing the pile were removed from its side, which further endangered its stability, and no precautions were then taken to prevent it giving way. Complaints were made by the pursuers and their fellow-workmen to the defenders' foreman, and he had a prop put up at the side where the bulge was greater, and on the opposite side from where the pursuers were working. The pile still further gave way, and further complaints were made to the foreman, but nothing was done. He informed them there was no danger, and to proceed with their work, which they did. On the morning of May 4 the pile fell and covered the pursuers up, and inflicted on them the injuries which were here founded on. In defence it is denied that there was fault on the part of the defenders, and it is said that the injuries sustained by the pursuers were of a very slight character, not necessitating their ceasing work for more than a few weeks at the outside.

The jury, after a considerable absence from Court, returned an unanimous verdict for the pursuers, but stated that they were divided as to the amount of damages. It was agreed to take the verdict of the majority on this point—that is, 10*l.* each to the pursuers. The defenders had sometime previously offered the pursuers 12*l.* 10*s.* with expenses. The verdict did not carry expenses.

**An Interesting Discovery** has just been made in the course of the excavations in the Forum. In removing the causeway passing across the area in front of the Arch of Septimius Severus, the remains of an ancient and forgotten church, now recognised as that of Santa Maria in Foro, have been found beneath the road. The church, which is of small size, was constructed within the western porticoes of the Basilica Julia and on the ancient level.

## CHURCH BUILDING AND RESTORATION.

**Birmingham.**—The chancel and nave of St. Nicolas' Church, Lower Tower Street, have been enriched by the insertion of two additional lights in the east window and the erection of a stone pulpit. The pulpit, which is executed entirely in selected Bath stone, is raised five steps above the level of the nave, and stands contiguous to the easternmost pillar of the nave arcade on the north side of the church. It is a tasteful piece of work, and has been executed by Messrs. Jones & Willis from the designs of Mr. John Cotton, architect. The pulpit is the gift of a lady recently deceased. The two additional lights inserted in the east window complete the subject of the Crucifixion commenced a year ago. The work has been executed by Messrs. R. W. Winfield & Co., successors to Camm Brothers, of Smethwick, and under the personal direction of Mr. T. W. Camm, at a cost of 120*l.* The glass is remarkable for its brilliancy. The window is the gift of a lady, and will, when complete, be one of the finest in the town.

**Penkridge.**—The parish church, which has been undergoing works of restoration, under the direction of Mr. J. A. Chatwin, architect, of Birmingham, has been reopened. The work has been carried out by Messrs. P. Horsman & Co., of Wolverhampton. Messrs. Charles Smith & Son, of Birmingham, put in the heating apparatus, and also the wrought-iron framed guide for the bell-ropes.

**Marhamchurch.**—A Wesleyan chapel has been opened at Titson, near Marhamchurch, providing accommodation for about 100 persons. The building, which has been erected by Mr. W. A. Beckly, builder, of Holsworthy, has been designed by Mr. C. P. Wise, architect, of Launceston.

**Perth.**—Plans for a new church at Perth for the congregation of Free St. Leonard's have been prepared by Mr. J. J. Stevenson, London. The church will be erected in the later Scotch Gothic style of architecture, founded on old examples, such as St. Giles's, Edinburgh, Stirling, Linlithgow, and St. Monance, in Fife. In the area of the church there will be 545 sittings in pews, 53 in open seats, and 58 seats for the choir and elders, and in the gallery accommodation will be provided for 329 persons, making a total of 985 sittings. In connection with the church there will be a hall seated for 309 persons. It is estimated that the buildings will cost between 7,000*l.* and 8,000*l.*

**Essex.**—Pattiswick Church has been reopened after restoration from the designs of Mr. Dampier, of Colchester, Messrs. Gardner & Son, of Coggeshall, being the builders. The nave has been thoroughly restored, and the old pews have been replaced by benches, or otherwise altered and improved. The roof of the nave has undergone thorough repair, and the flooring laid with Godwin's tiles. The contract amounted to 1,462*l.*

**Ipswich.**—The restoration of the tower of St. Lawrence Church, Ipswich, has been completed. The work of restoration has been carried out by Mr. George Barrett, contractor, under the direction of Mr. Barnes. The tower has been re-cased with new flintwork, the old decayed material having been cleared off. The panelling and tracery are carried out in accord with the general style of architecture in the building itself, whilst beneath the belfry windows is rich diapering. The belfry windows, four in number, are reset in Portland stone, there being on each side buttresses carried by angels, and Portland stone has also been used for the quoins and other parts of the new work, the wall space being inlaid with masonry. The tower is surmounted by a pierced parapet in pinnacles. The work has cost some 1,400*l.* to 1,500*l.*

**Sowerby.**—The Methodist Free Church has been reopened after enlargement. The contractors were:—Mr. Siddall, Sowerby Bridge, ironwork and masonry; Messrs. C. & W. Whiteley, Rishworth, joinery; Mr. R. Stafford, Sowerby Bridge, plumbing, glazing, and gasfitting; Mr. J. Robinson, Luddenden Foot, slating and plastering; and Mr. J. Lumb, Gatelands, painting. Mr. T. L. Patchett, of Halifax, is the architect.

**Cannock.**—The parish church of St. Luke has been reopened consequent on the completion of alterations and extension. The work of enlargement has been carried out under the direction of Mr. N. Joyce, architect, of Stafford. The contractor was Mr. Williams, of London. A stained-glass memorial window has been inserted at the cost of Mr. E. Christian.

**Crewe.**—The foundation-stone of a Methodist church has been laid. The building, estimated to cost 4,400*l.*, is to accommodate 764 persons. The architect is Mr. Hirst, of Southport, and the builder Mr. Cotterill, of Crewe.

**Coventry.**—A new chapel is being erected in Vine Street, Coventry, to provide accommodation for about 550 persons. Messrs. G. & J. Steane, of Coventry, are the architects, and Mr. C. Hayward, jun., of Coventry, is the builder.

**Wellington.**—The parish church has been reopened, after undergoing works of renovation and decoration under the direction of Mr. Randal, F.R.I.B.A., of Shrewsbury. The building work has been executed by Messrs. Bullock & Son, and the decoration by Messrs. Marston Bros., of Shrewsbury and Wellington.



## ART SCHOOLS.

**Nottingham.**—Two very useful scholarships are offered to students of the Nottingham School of Art. One, given by Mr. S. Dutton Walker, F.S.A., a member of the committee, is for the encouragement of the study of architecture, and is of the value of 25*l*. Its direct object is to assist the successful competitor to visit the Continent for the purposes of study; and, to ensure this, the amount will be paid to him on signing an undertaking to carry out the intention of the donor, and on his return to submit the works executed during the tour to the committee. Competitors must have been students of the School of Art for not less than four months previously to April 2, 1883, and must have made not less than thirty attendances. The competitors will be subjected to an examination in writing, in which they are expected to show a general knowledge of the principles of ancient architecture and of the leading features of the Classic orders; also a knowledge of the characteristics of the style generally termed Gothic. They will further be expected to submit a design for a new building, in any style, to be chosen from the following:—A church, a mortuary chapel for a cemetery, a Nonconformist chapel, a market hall, a town hall, a free library, a museum, a school of art, a school-board school, or a villa residence to cost not more than 1,200*l*., or a pair of villas to cost not more than 2,000*l*. The second scholarship, entitled the "Nil Desperandum" art scholarship, is open to the same class of competitors, is also of the value of 25*l*., and is intended to assist the competitors to study in Continental galleries and towns, under conditions similar to those imposed in the case of Mr. Walker's scholarship. In this competition there will have to be submitted:—A sheet of foliage, drawn from nature, in outline; a sheet of at least two flowering plants, painted in water-colour from nature, without background; and a group of still life, or a landscape from nature, or a painting of a head from nature. There are various other conditions imposed in each case as to dates and the adjudication of prizes.

## ARCHÆOLOGY.

**Newcastle Society of Antiquaries.**—A meeting of members of the Newcastle Society of Antiquaries was held on October 25. Dr. Bruce stated that they had had a stone figure presented to them from London similar to those at Alnwick Castle and other places. At one time stone figures were placed upon the walls of Newcastle with the view of impressing invaders with the idea that the townspeople were on the *qui vive*. As a fact, invaders were never deceived after the first time, and the stone figures passed into disuse. When the wall was repaired they were put into it. Besides the one that had just been presented to them they had several others.—Mr. Hodgkin stated that the committee in connection with the Black Gate had made considerable progress. They found the premises in a most wretched condition, but the place would come out all right he thought. The upper part had been condemned as unfit for human habitation, and was full of all sorts of dirt. The matter was in the hands of Mr. Johnstone, the architect, who was preparing plans, and he thought it would be certain to be in shape by the next meeting of the society. The great point upon which the committee seemed rather divided about was whether to recommend a flat roof with battlements or the reconstruction of the present roof. The difficulty about the battlements was they had no authority for the construction of battlements. They did not know that there ever had been battlements there; and if there had they did not know what the battlements should be like. Besides, battlements would be a little more expensive. He thought that the majority of the committee were in favour of the reconstruction of the present roof.—It was agreed that the thanks of the society should be tendered to the Duke of Northumberland for the present of the following books:—"A Descriptive Catalogue of Antiquities (chiefly British) at Alnwick Castle," "Catalogue of the Collection of Egyptian Antiquities at Alnwick Castle," by S. Birch, D.C.L., LL.D., F.S.A., keeper of the Egyptian and Oriental Antiquities in the British Museum.—Dr. Bruce stated that the fourth Duke of Northumberland spent many years in Egypt and brought home with him a valuable store of antiquities, which had been referred to in the writings of Sir Gardiner Wilkinson and others, and which had been catalogued in the magnificent book presented to them by Mr. Birch, one of the highest authorities on these matters.

**The Ardagh Chalice.**—A copy of the famous Ardagh chalice has been placed in the Science and Art Museum, Edinburgh. The chalice, which with a number of brooches was found at Ardagh in Ireland on the estate of Lord Dunraven, at the foot of a tree, is understood to belong to the fifth century, and is considered by antiquaries to be the finest piece of Irish Celtic work of the kind extant. The present copy, one of five which have been made, faithfully reproduces in every detail the features of the original, which is of silver and gold chastely enamelled and decorated with precious stones. The chalice stands 6 inches in height, the diameter of the bowl being 7 inches. Just below the brim, on the outside of the bowl and passing through the opening of the handles,

is a band of gold filigree work, divided into panels, which are separated by bosses of enamel mounted in gold. Each panel has a separate pattern worked out in it with rare artistic taste. The handles are in enamel and gold; and below them, and on each side of the cup, between them, are massive circular gold plates, showing characteristic Celtic scroll work, and studded with bosses of enamel. The stand is of gold, with rich scroll ornamentation; and round the foot of the chalice is another decorated band. The foot of the chalice is hemispherical; and a remarkable feature of it is, that the concave under-side has also been most lavishly decorated, the work being of quite as high a character as that on the outside of the bowl. In the centre is a large and pure conical rock crystal, and around this runs a broad band of gold bearing exquisite scrollwork, and in which are set five emeralds. Round the inner edge of the foot there are eight narrow panels—six in silver, all of different patterns, and two in gold, the latter being decorated with the "Fylfot" ornament, and the panels being separated by enamel work sunk into the band. On the outside of the bowl, and below the gold enamelled band already mentioned, is an inscription in old Irish characters, the beauty of which adds very much to the appearance of the cup. Along with the chalice were found four handsome Celtic brooches, of which also casts are shown. One of the brooches is a penannular of very chaste design. Another part of the "find" was what had apparently been the bowl of another chalice, but which had been broken while in the hands of the artificer. The break, which is a somewhat curious one, is cleverly reproduced in the *fac-simile* now on view beside the chalice.

## GENERAL.

**Mr. G. E. J. Powell**, Nantow, Aberystwith, has bequeathed to the museum of the University College of Wales a valuable collection of art treasures and antiquities.

**Mr. Edward Ryde** will deliver an address at the opening of the session of the Surveyors' Institution on the 13th inst.

**Messrs. Douglas, Hunter & Whitson** have been appointed surveyors for the new Municipal Buildings, Glasgow. The other candidates were Messrs. Henry Herbertson & Co. and Messrs. Shields & Walker.

**Messrs. Jones & Willis** have completed a set of oak choir stalls for Trinity Church, Llandudno. The front desks are carried out with richly-cut mouldings and carved strings, with an arrangement of sunk quatrefoils separated by buttresses dividing the desks into panels.

**The Birmingham Master Builders' Association** will hold its annual meeting at the Great Western Hotel, Birmingham, on Monday.

**The "Gazette"** announces the dissolution of partnership of Messrs. Austin, Johnson & Hicks, architects, Newcastle-on-Tyne, and also of Messrs. Hargreaves & Bailey, of Bradford.

**The Russian Finance Ministry** have assigned a sum of 400,000 roubles for the construction of a Custom-house and warehouses on the new St. Petersburg Sea Canal.

**The General Commission** for the International Exhibition of Fine Arts in Rome have approved the proposal of the executive committee to postpone the opening of the exhibition to January 14, 1883, and to prolong the period for the delivery of works until December 1 next.

**A Collection of Greek Cups**, found at Delphi, will shortly be exhibited in the British Museum.

**The Sanitary Institute of Great Britain** has accepted an invitation to Glasgow for the Autumn Congress and Exhibition next year.

**The Directors of the Hull Savings Bank** have awarded the premium of 20*l*. to design by Mr. Robert Clamp for the new bank at the corner of George Street and Smeaton Street. Thirty-two designs were submitted.

**The Post Office Authorities** propose to erect the Parcels Post Receiving Office in Somers Town, in order to be near the railway termini at Euston and at King's Cross.

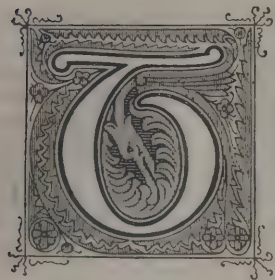
**Mr. F. Villiers**, one of the special artists of the *Graphic* during the recent war in Egypt, and Mr. Melton Prior, have been decorated by the Khedive with the Order of the Osmanieh.

**Professor Colvin** is now delivering a course of lectures in the Fitzwilliam Museum, Cambridge, on Tuscan sculpture. The opening lecture on Tuesday was on "The Greek and Mediæval Uses of Sculpture." The remaining lectures will be as follows:—Nov. 3, "Varieties and Applications of Sculpture in Italy, A.D. 1250-1500"; Nov. 7, "The Revival: Nicola and Giovanni Pisano"; Nov. 10, "Andrea Pisano and Orcagna"; Nov. 14, "Jacopo della Quercia and Ghiberti"; Nov. 17, "Donatello"; Nov. 21, "The Della Robbia"; Nov. 24, "Verrocchio and Pollaiuolo"; Nov. 28, "Desiderio da Settignano, Bernardo and Antonio Rossellino"; Dec. 1, "Benedetto da Majano, Mino da Fiesole, Civitate."



# The Architect.

## THE NEW PRESIDENT OF THE INSTITUTE OF ARCHITECTS.



THE address with which a new session of the Institute of Architects has been opened by Mr. HORACE JONES as President, regarded with reference to its substantial merits, is sufficiently promising. This is not the first time that the members have experienced a certain relief in descending from the higher ground of literature and art to contemplate the practical affairs of ordinary life. Of all men Mr. HORACE JONES is emphatically one of those who are animated by a single-minded desire to do what in them lies to promote "the greatest happiness of the greatest number," and to do so not philosophically, but—what is better—experimentally. The large experience of affairs which he has acquired as architect to the Corporation of the City of London, even if he were not personally so characteristically genial and goodnatured as he is well known to be, qualifies him especially for assuming the duty of discoursing in unaffected language upon the everyday things of his profession and his guild. The manner, also, more than the matter of his address—the general scope of it rather than its argument in detail—may be accepted with no little advantage as material for thought rather than criticism. In short, the question may be far from a profitless one, What has an architect in the position of Mr. HORACE JONES to say just now about the affairs of the Institute and of the architects of England as thereby represented?

There are two points amongst those which were thus dealt with which may be supposed to be of chief prominence; namely, the introduction of the examination qualification, and the demand of the provincial members for participation in the elections. We may observe *in limine* that Mr. JONES was extremely frank in his account of the first of these, and equally liberal in his views upon the second.

The impression which was probably left upon most minds as regards the newly-established "exam" for associateship would seem to be that the principal anxiety of the Council and the examiners has turned upon the fear of making it not sufficiently easy. Whether this is a policy which will meet with universal approval is doubtful. Possibly the repeated reiteration of the idea—for every opportunity has been taken by the Council to put the case in this light—may be no more than a bid for candidates by advertising facilities. Possibly also the remarkable and scarcely dignified rush of applicants for admission last year, just before the new rule was brought into operation—some two hundred young men, in fact, having thus openly avowed their horror of examination—may have naturally alarmed the authorities. But men of academical experience will probably be found to advise that much more care should be taken in avoiding the establishment of a low educational standard than in merely facilitating the admission of new members; and consequently it may soon become an urgent question whether the apparent encouragement of weak candidates ought not to be changed for a practice of a directly opposite character. It may be deemed by many, therefore, to be a pity that Mr. JONES should have dwelt with such excess, as they will say, of kindly feeling upon the desire of the Council to temper the wind so very carefully to the timid lambs of the architectural fold. What we want, they will go on to say, is strong men, not weak, in an age which has little sympathy anywhere for people who cannot take care of themselves, and very little indeed for professional persons who cannot take care of their clients.

If we understood the President aright, it is the further policy of the Council to give the go-by to art altogether in this examination; and if so, a considerable section of the professional community will unquestionably not be disposed to take kindly to this. It is, of course, easy enough to say that matters of taste are always matters of dispute; but this is not the point. Even if what used to be admired so much not very long ago under the name of eclecticism were much more nearly extinct than it is, surely there ought to be found in the

front ranks of the Institute men sufficiently able to judge of design in more styles than one? In fact, at the present moment especially the state of experimental criticism ought rather to be unusually free from personal prejudice; and if not, it would scarcely be a difficult thing to appoint for this particular part of an examination several adjudicators of diverse tastes, so that the work despised by one might be esteemed by another. At any rate, one point upon which a great many advocates of an educational test have been especially urgent is the necessity for every recognised member of the guild being competent to turn out common artistic draughtsmanship and design, in some style or other, creditably; and even if the style selected were no less extraordinary than that of the Himalaya Mountains—which, it seems, is to form the subject of a lecture in the course of the current session of the Institute—there is no reason why this should not be accepted, and perhaps with satisfaction for the sake of change. We would venture to express the hope, therefore, that before long the exclusion of artistic design from the examination will be reconsidered, and the power of producing at least a good commonplace composition insisted upon as an essential part of an English architect's accomplishments.

Referring to the application of the members resident in Manchester and elsewhere for such an alteration of the mode of voting as shall afford to them a share in the election of officers, Mr. HORACE JONES, in his genial way, informed the meeting that a deputation is to discuss the matter with the Council presently, on the understanding that, if any means can possibly be devised for meeting the wishes of the provincial members, the Council may be relied upon to approve such a scheme in the interest of fair dealing. We have already discussed the subject in the pages of this journal, and it is unnecessary to repeat our opinion that some means ought certainly to be contrived for thus enfranchising what is probably a clear majority of the members—at present virtually shut out from voting. How this is to be done is the only question open to discussion; and the best answer to offer is to quote the familiar proverb, "Where there's a will there's a way." The President now tells us that the Council have developed the will; we may be quite sure the President himself possesses it without reserve. The way, then, is simply this, that the accidental language of the law, adopted at a time when the Institute consisted of a small number of members, almost all resident in London, shall be re-interpreted so as to accord with the changed circumstances of the present day; for example, that an informal vote shall be taken on paper preliminarily, and its result admitted at the meeting as an act of courtesy. In a word, the obstacle to be overcome is the use in the law of a single phrase—namely, "members *present*"; and it is too plain to be a subject for argument that these words could not possibly have been intended to mean, half a century afterwards, that a good half of the members, being necessarily precluded from being present, should be expressly deprived of their fair share in the franchise.

Judging by the demeanour of the new President as a whole, we are not indisposed to think that his presidency may turn out to be no small boon to the Institute. There are so many and such diverse objects to be attained in such a society, that it is by no means a feeble suggestion to offer, that if the President is really in some measure to be a governor now—as seems to be probable—a change of mind in such governors is essential. The late Mr. STREET would no doubt have exercised the full authority of his office as President in a way entirely his own; just as Mr. BARRY did in a widely different way. Why should not Mr. HORACE JONES do likewise in a way not at all like either of these? To calm the discontent which prevails as the result of "strong" government, why should not the good-natured *bonhomie* of the City Architect be exactly the proper treatment? A thoroughly genial liberality of sentiment goes a long way in smoothing difficulties. Royal Academicians and Royal Medallists are no doubt glorious personages; but we should not be surprised if a great many of the members of the Institute were to find out that a City Architect, who is neither an Academician nor a Medallist, but a "jolly good fellow," may answer their purpose quite as well as either, and even better than either, when the work to be done is the work of simple common sense and entirely unpretentious goodwill to all men. We consider it a duty, therefore, to bespeak for the new President the most conscientious consideration; and this all the more because of the circumstance of his right having been in a manner disputed,



which entitles him, as we think, now that the controversy is over, to expect a generous support from all liberal-minded brethren. We wish Mr. HORACE JONES, therefore, every possible success in the new position which he occupies; and we again take leave to offer the hint, that the surest way for him to secure such success is to lay himself out for the earnest promotion of disinterestedness, impartiality, and true fraternal feeling.

#### TRAVELS IN SOUTH KENSINGTON.\*

MR. CONWAY is so liberal in his praise of English institutions that one can hardly venture to find fault with his book. A Frenchman or a German who knew something about the museums and art schools of the Continent might be in a position to write about South Kensington and its system, but as an American Mr. CONWAY cannot have had much experience in art teaching, and his book shows that he knows little about art. Besides, he has been too long in this country not to be affected by English prejudices, and he cannot therefore represent the impressions of a student who came fresh from Boston or New York. A series of essays by Mr. R. G. WHITE on the subjects selected by Mr. CONWAY could hardly fail to be useful as well as interesting, for they would express the thoughts of a shrewd and self-reliant observer, and exemplify that "restless, prying, conscientious criticism" which, according to Mr. EMERSON, is a product of modern New England. It is indeed difficult to describe Mr. CONWAY's volume. It is not what we should expect from an American, and yet it is not English in tone, and it does not display that knowledge of art which educated Frenchmen and Germans possess. What is most characteristic in the "Travels," &c., is the courage of the author. An English writer would shrink from the task of producing a volume which begins with a "prolegomena" about the journey of London during eighteen centuries, and winds up with a laudation of the author's landlord, the landlord's property, and the landlord's family.

It is, we suppose, natural for an American's thoughts to run upon revolutions, otherwise it might be difficult to explain why it should be stated, in accounting for the origin of South Kensington, that "the Great Exhibition (of 1851) may be termed, so far as English art is concerned, the great revolution." Improvement in design was visible before that time. We give Mr. CONWAY the credit of supposing that he was not in London in 1851, and that he was relying on some worthless authority when he speaks about the English articles there seen, "exciting the laughter of cultivated foreigners to such an extent that English gentlemen were scandalised and abashed without knowing precisely what was the matter." We have no hesitation in saying that people who remember that wonderful sight hold a different opinion. There was much, very much, in the Exhibition of which England might well be proud. One circumstance will suggest the truth of the assertion. In those days it was the policy of the men who were endeavouring to excite interest in the extension of art by the establishment of art schools to enlarge upon the defects of English work. But the words of the most prominent among them may be cited as evidence to prove the inaccuracy of Mr. CONWAY. HENRY COLE was not likely to flatter designers and manufacturers who were without the advantage of official teaching. But when lecturing on the Exhibition soon after it closed, he acknowledged "that certainly the industry and perhaps even the art of the United Kingdom took the first place in the race;" and in another part of the same lecture he says: "England, even on the question of art, was not behind other nations." If HENRY COLE was not scandalised and abashed by what he saw, it may be doubted whether other people were more susceptible. Mr. CONWAY says "such a display of florid and gorgeous tinsel, to use REDGRAVE's description, was never seen, unless in the realms of King COFFEE." Let us ascertain what authority Mr. CONWAY has for ascribing the description to Mr. REDGRAVE. It will be remembered that Mr. REDGRAVE wrote a report on the Exhibition, which, among other good qualities, is distinguished by an absence of rash statements that is rare in criticism. There was one style which the artist disliked above all others, viz. the Louis Quatorze. He explained its defects, but he pointed out its adaptability for magnificence and display, and suitability for

the display of gilding. "From these qualities," adds Mr. REDGRAVE, "it has long maintained its hold on the public taste, and its florid and gorgeous tinsel still prevails in three-fourths of the works of the Great Exhibition." There is nothing in these words to suggest barbaric art, and it is unjust to the author to twist his words into a meaning which he did not intend by them.

It will be seen from what we have said that in setting out on his travels Mr. CONWAY stumbled, and he hardly recovered himself throughout the journey. When he describes the outside of the buildings at South Kensington he tells us that Mr. MOODY's sgraffito on the back wall of the Science School was produced "by filling in the hollows of the cement," and that is "analogous to the niello which was graven in silver and the lines filled in with carbon." It is needless to say that Mr. CONWAY's words are more suggestive of what sgraffito is not than of what it is. There is no "filling in," for the process is allied to cameo cutting rather than to niello work.

When our traveller enters the Museum he is forthwith captivated by the windows (or as he calls them window etchings) in the Ceramic Galley, by his friend Mr. WILLIAM B. SCOTT. Seven pages are occupied in eulogising them. We should not object to the appropriation of so much space to one kind of work if the whole Museum were described on the same scale. But when it is found that hardly a word is said about the oil paintings or the water-colours, and that entire sections of the Museum are unnoticed, the object of Mr. CONWAY's travels is beyond comprehension. His book suggests that the most important things in the Museum are some specimens of pottery, the examples of Indian art, and Mr. SCOTT's windows, and that visitors are most impressed by the expressionless visage of the colossal bronze figure of BUDDHA.

Modern collectors will rejoice to find a kindred spirit in Mr. CONWAY, for when describing the contents of the Museum he appears to be most delighted in looking at things of which the money value has increased. Its buildings and contents, he says, "have cost the nation about one million pounds; an auction on the premises to-day could not bring less than twenty millions." Some of the Sèvres vases in the Ceramic Gallery are, it seems, "marked at 100*l.* or 200*l.* of a like quality with those six for which Lord DUDLEY recently paid 17,500*l.*" Not a word is said about the appearance or the intrinsic worth of the bargains. The HENRY DEUX candlestick, which cost 750*l.*, is "one of the cheapest purchases ever made," because the ROTHSCHILD family are willing to pay high for examples. The cartoons of RAPHAEL suggest the thought, "What would not now be paid for the three that are lost?" And the style in which the donations to the Museum are mentioned is enough to excite the cupidity of all the States. Mr. CONWAY advises his countrymen to build museums, and treasures must gravitate to them. "This Museum," he says, "has received seven collections worth collectively more than two million dollars, thirteen bequests worth over half-a-million dollars, and a large number of donations whose aggregate money value is very great, though not yet estimated." It matters little what valuation brokers may place upon collections, unless the artistic worth of the objects is of a kind that is enduring. Mr. CONWAY, from thinking mainly of the financial aspects of a subject, has, we regret to say, been led into countenancing a mischievous policy when describing the art schools at South Kensington. He speaks of the exportation of designs to France, and he adds: "Even this is hardly so grateful to the English as a report lately made by a Glasgow firm, that it has for some years been obtaining from this Museum, at the annual cost of a few hundred pounds, designs such as it had been previously securing from Paris and Lyons at a cost of 2,000*l.* per annum." If for the French cities we substitute London and Glasgow, there would not be much cause for rejoicing in the report, and this should be done. The fact is, South Kensington allows itself to be made the tool of miserly manufacturers by encouraging competitions which are a ruse to obtain a variety of designs at nominal charges from students who are paid by the State, and consequently are able to work under different conditions from ordinary designers. It is therefore erroneous to estimate the condition of design in England from what is done at South Kensington. Far better would it have been for Mr. CONWAY to have consulted a few of the professional designers, when he would have discovered the true position of this country, and the extent to which we are able to compete with foreign artists.

The second part of Mr. CONWAY's book treats of "Decora

\* "Travels in South Kensington, with Notes on Decorative Art and Architecture in England." By Moncure Daniel Conway. Trübner & Co.



tive Art and Architecture in England," but there is little about the latter. He describes the decoration of several public and private buildings; and as he relies upon his own eyes for information, it is not only the most interesting part of the book, but the part which contains fewest errors. One sentence will suggest Mr. CONWAY's system of philosophy in other things besides art. "The houses of the millions are," he writes, "conventionally decorated now, and they are ugly; the individual taste will convert the commonplace forms and colours into individual expression, as his soul has previously transmuted the commonplace clay into a physiognomy like and unlike all others."

The outcome of all the organising, speculation, and practice in art matters during thirty years in England would appear to be found in Bedford Park, where Mr. CONWAY resides, and in which he claims an ownership, for he talks of our young men, our streets, our trees, our artists, and so on. The third part of the volume, in which the property is described, is enough to make the eloquent GEORGE ROBINS unhappy in Elysium, for his most famous advertisements are prosy if compared with Mr. CONWAY's visions. On his first sight of the building estate our author tells that he was afraid to rub his eyes "lest the antique townlet should vanish," and accordingly "he crept softly along as one expecting to surprise fairies in their retreat." When a man is given over to such illusions, how marvellous everything seems! The trees and houses, it is recorded, wave and smile through Mr. CONWAY's windows when he writes. The little club in Bedford Park becomes in his eyes "as pure a sample of civilisation as any on this planet." When the householders light their candles at night he beholds "unpurposed tableaux, which, were they visible any evening at the opera, would be declared fine achievements of managerial art." Whether the scenes recall grand or comic opera is not stated. In the public-house opposite the church luncheons and dinners are supplied according to the general practice of licensed victuallers, but the joints and vegetables are sublimated into a realisation of the dreams of PÈRE ENFANTIN and SAINT SIMON. The prices of the communistic feasts are not given, but Mr. CONWAY informs the public that at the *table d'hôte* the "rate is sufficiently moderate to place a daily dinner within reach of families who may find that desirable." One would have thought that in "a Utopia in brick and paint" sustenance of a less material kind would be sufficient. As the Park requires provisions, it must also, like other parts of benighted London, give attention to sewage, but even in relation to this matter Mr. CONWAY's eyes are not disenchanted, for he believes that Nature has provided a main sewer for the use of himself and his neighbours. Bedford Park, he says, "has easy access to the river for its drains," a statement which it is to be hoped may never meet the eyes of the Conservators of the Thames.

It is not surprising that so wonderful a region, where there appear to be no quarter-days or applications for taxes, should attract sightseers. We are told that "now and then the fair riders of Hyde Park extend afternoon exercise to enjoy a look at the new suburbs." Real live members of Parliament have trod the bosky avenues, and, incredible as it may appear, Mr. CONWAY asserts (and we see no reason to impugn his veracity) that "one day the grand face of JOHN BRIGHT, with its white halo of silken hair, was seen among us." It might be supposed that that visit would be enough to satisfy the inhabitants, but Fortune had another favour to bestow. "H. H." appeared in the townlet! Who "H. H." may be we have not the privilege of knowing, but Mr. CONWAY, in his description of the phenomenon probably is as accurate as he is in other parts of the book.

"Our most memorable visitor was," he says, "'H. H.,' whose eyes illuminated our town for a day or two, and then went away with such pictures as can only be painted when such vision as hers comes upon such a vision as she found here. She came from a beautiful home in a beautiful land; from bright rooms decorated with many a brilliant stripe and spot contributed by the wild creatures and growths of Colorado, and touched all over with her own poetic taste; and she realised at once that she had come to sister homes with hers, where there was the same desire to cultivate beauty in harmony with Nature," &c., &c.

How commonplace after that does the description seem which the old-fashioned Vicar of Wakefield wrote concerning his distinguished visitors. Although there is no report of the discourses of "H. H.," we may be sure she would not demean

herself by talking of pictures, taste, SHAKESPERE, and the musical glasses, like Lady BLARNEY and Miss SKEGGS, and from this we can gauge the progress of civilisation during a century and a half.

The visited in Bedford Park, if not equal to the visitors, are likewise in their way notabilities. Among the tenants, we are informed, may be reckoned an ornithologist, the writer of a book on demonology, a biographer, a philanthropist, a storyteller, and a member of a School Board. These may be the chief celebrities of the Park, but there must surely be many tenants who have reputations. Notwithstanding his modesty, we are confident Mr. CONWAY has as much right as any of the people he names to be classed among those he calls "minds." His "Travels" alone should be enough to qualify him.

From what we have heard of his career we believe Mr. CONWAY to be a very worthy man, and he has done service from time to time in making England and America better known to one another. But his desire to be useful sometimes places him in awkward positions. The late Duke of WELINGTON, in his curt way, once said that the best policy for the Papal Court would be to grip the coat-tails of Austria and hold on. This is the principle by which, unless we are mistaken, Mr. CONWAY is guided. He lays hold of all sorts of causes and persons, apparently regardless whether he is serving them or not. He is, no doubt, eager to see art cultivated among his countrymen, but there would be more likelihood of attaining this end if, instead of attempting the journey himself, he had persuaded one of the clever American artists who are every year visiting Europe to undertake the "Travels" through South Kensington.

## THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE first ordinary meeting of the Institute was held on Monday evening, Mr. Horace Jones, President, in the chair. The decease was announced of Mr. R. L. Sibley and Mr. T. E. C. Streetfeild. The following gentlemen were elected by ballot:—Fellows—Mr. C. Trubshaw and Mr. W. H. Picton. Associates—Messrs. F. de Jersey Clere, J. W. Simpson, A. S. Gover, F. Hooper, N. J. Stanger, C. J. Tait, C. S. Smith, G. A. T. Middleton, S. C. Rogers, P. Cowper, E. W. Poley, and R. W. Bousfield.

The President then delivered the opening address, of which the following is an abstract:—

### The President's Address.

The PRESIDENT spoke of the events of the past session, the hopes and expectancies of the present one, and generally of matters now interesting the world of architecture and its sister arts. The Institute's losses by death had been more than ordinarily serious, first and foremost being a national rather than a merely professional bereavement in the vacating of the Presidential chair by the death of Mr. Street. They were the more forcibly reminded of the sad event by the circumstance that at this very time arrangements were being made for the State opening of his greatest work, the most important national building completed since the Houses of Parliament. Had he lived to see the inauguration of the New Law Courts it might have been hoped that some special decoration, in public recognition of his toil, skill, and genius, might have been granted him. The audience was reminded of Mr. Street's earnest advocacy of the preservation of the City churches, and of his brilliant and exhaustive opening address last year. One further act remained for the Institute—the placing of his memorial portrait on its walls. For though it had been often mooted that the custom of thus honouring their past Presidents should not be allowed to harden into an inflexible rule, he felt sure none would be for making the break upon this occasion. In the new Palace of Justice its architect would have his statue, but that was no reason why the Institute should forego its right to a canvas memento of its late illustrious President. Brief obituary notices were next given of two past Vice-Presidents, Mr. Decimus Burton and Mr. Mocatta, neither of them of late much spoken of in the profession, but both noted more or less in former times, Burton especially having been a ruling light and power in architecture half a century ago. The death of Mr. George Somers Clarke was too recent an event to allow of his being as yet adequately commemorated. The President had lost in him a special friend. He was a pupil of the late Sir Charles Barry, travelled through Italy, France, and Germany about thirty-six years ago, and wrote for the Architectural Publication Society. Tallis's printing-house and other large mercantile buildings in the City were designed by him, and, together with some of his country-houses, especially one for the late Mr. Hermon, marked well his talent and originality. The accessions to the ranks of the Institute during the past year had been 42 Fellows and 223 Associates. Some of the papers read at their meetings had been more than usually interesting. The



President instanced Mr. Hugh Stannus's on "The Artistic Treatment of Constructional Ironwork" as a most acceptable essay. Indeed it might have been wished that the author could have had more time allotted to him; but they were willing to accept it as a prelude to a future paper on the same subject, which might be further developed to the great advantage of them all. Mr. John Slater's paper "On Recent Progress in the Electric Lighting of Buildings" was perhaps even a more popular production of the session. The practical utility of the subject, the interest felt and shown by all in the wonderful adaptation of science to the wants of the whole world, an interest resulting in so many national and international electric exhibitions; and the pleasant way in which the whole was popularised, could not fail to charm and instruct the audience. The President did not wish his special allusion to these two papers to be understood as a depreciation of other communications. Reference was next made to the Institute's important labours for the adjustment of the vexed question of Light and Air. The report was not yet ready for presentation to the members, but when produced it would be found, the President believed, useful, valuable, and exhaustive. Many minds had been brought to bear upon the problem, and to harmonise the various views they had taken of it, so as to reduce them into an orderly and useful digest, required time, care, and discretion. Two or three other questions before the Council had in like manner long waited to be reported on, not from any supineness on its part, but with a view to make the reports as perfect as possible.

The session of 1881-2 would long be memorable for the inauguration by the Institute of its system of compulsory examination. The Council, having seriously weighed the question, had come to the determination that they would begin with an examination neither too strict nor too exhaustive. After complimenting the examiners, with special mention of Messrs. Grüning, Mathews, Robson, Watson, and others, the President remarked that at present their curriculum might be truly described as a preliminary one, not insisting on more knowledge than was absolutely indispensable to any aspirant to employment as an architect. He was firmly convinced, however, that whilst it would be both practicable and wise to extend the range and to increase the stringency of the examination, it would be difficult and injudicious to make a fresh start from such a high level as to necessitate a recurrence to a lowering of their standard. Very much remained to be done in future years, not only by the Board of Examiners, but also by the candidates themselves. Every candidate should be encouraged to pass as an Associate before aspiring to be a Fellow. The examination must be scientific and practical rather than æsthetic. Art could not be tested in the same way as arithmetic, and what Cowper said of a poet was no less true of an architect—

A poet does not work by square or line,  
As smiths and joiners perfect a design.

Perhaps there was no better test of art knowledge than the numerous and valuable prizes offered for competition by the Institute. The President spoke highly of the good work done by the Architectural Association in preparing for the examination many of the best candidates. The Royal Academy was able to bestow even more valuable awards and honours than the Institute, and he believed they were always given with great care and appreciation. The curriculum of the Academy's Architectural School, under Mr. R. P. Spiers, a friend and Fellow of the Institute, showed that in many branches of art no student lacked opportunity to perfect himself, any more than in the scientific branches of the profession. Careful drawing and modelling were insisted on, as well as attendance upon lectures on perspective, and there were liberal rewards inducing to earnest study. Like aids in mastering the theory and practice of their art were to be found in the architectural classes at University and King's Colleges. No doubt museums of models and casts, for which there was still much outcry, would prove a great boon to many, but casts were no proper substitutes for originals, where these themselves could be studied. But after all that schools could do to fit a man for the present examination, or for some higher one, there was still to be acquired the practical education best learnt in an architect's office, whether large or small—for each had much to be said for it—and in everyday business red tape was, perhaps, a bad master, but it might often be found a good servant. In every calling there was much detail work which was best learnt when very young, and familiarity with which saved much time in after-life, often enabling men to form quick decisions seemingly prompted by instinct or intuition. The President illustrated the importance of the practical side in the architect's education by pointing out the prominence of the element in the examination for the military profession. He referred also to actual or possible relations of the Institute with schools of practical engineering and with the City and Guilds of London Institute, whose Technical College would doubtless welcome such an alliance. The college would afford young architects insight into artificers' work, whilst its students might be aided by the body to which his audience belonged in the study of the more scientific and æsthetic branches.

National and International Exhibitions were the next topic, *à propos* of those forthcoming at Amsterdam and Berlin, both of which, it was understood, would devote much of their space and efforts to art. At the outset, the President threw out a suggestion

by the way, that the Sanitary Institute of Great Britain might well make itself the Sanitary Institute of Europe, and hold forthwith, as such, an International Congress of its own. There were many sanitary matters of cosmopolitan interest, and especially applicable to all large European towns. The safeguarding of public buildings, especially theatres, against fire was another question of common interest to all the great capitalists, and the panic caused by the terrible catastrophe at Vienna drew attention to the want of international conference on such problems. Friendly converse between experts from the different countries might lead to the general adoption of all really necessary precautions, and at the same time tend to moderate the excesses of Government interference, such as those into which the Austrian authorities had been frightened in this melancholy instance. The President here glanced at Mr. Aitchison's advocacy of the artistic employment of colour in the interior of houses before a Provincial Congress, and took occasion to notice the sudden turn taken by the public taste in a polychromatic direction.

The year had not been rich in architectural and æsthetic literature. Such productions as the Edmund Sharpe Memorial were not common, and its usefulness to the architect, as well as to the general art student, would make this unique work highly prized. The "Lectures" of a former vice-president of the Institute, the late E. Middleton Barry, edited by his brother, Canon Barry, came next; and a projected reproduction of Art Costumes. The completion of a translation of Viollet-le-Duc's "Lectures on Architecture" had appeared, and there had been published several treatises on Warming, Ventilation, Plumbing, Sanitation, Practical Geometry, and Iron Construction as applied to Roofs. The Americans had sent us their views on Cottage, Farm, and Villa Architecture, as well as on the Interior of Dwellings. From France has been received the concluding *livraison* of "The Vatican"; a work on the construction of the Hotel de Ville; another on the Chateau of Versailles; several on the Renaissance; and another part or two of the works of Viollet-le-Duc. Germany had given us photographic views of executed buildings in her chief cities, and works on the various architectural styles and their history.

Passing to the subject of restorations, the President said those at Bristol under their friend and Fellow, Mr. J. L. Pearson, R.A., would doubtless add to his laurels, but some regret had been expressed that his plans involved the destruction of the abbot's lodgings. St. Albans was still a focus of discussion and criticism, and was likely to be so for some time to come. The Tower of London was now, he believed, about to receive the attention of the restorer.

In the archæological investigation of Classical architecture what now mainly interested men of culture was the contemplated resumption of Mr. J. T. Wood's excavations at Ephesus. They could only hope that an undertaking on which that gentleman had lavished so many years of patient and thoughtful toil, and from which nothing but the exhaustion of his resources could have induced him to desist, might be started afresh and brought to a successful issue. The Temple of Diana at Ephesus was unique among Greek fanes. It was not a copy of the Parthenon at Athens, but had an individuality of its own, making it a type by itself. As to the importance of its rescue from the dust of ages, Professor Newton's words were quoted:—"The complete excavation of the Temple of Diana at Ephesus is an object well worthy of support from the nation, which now possesses in the British Museum the only portions of the beautiful sculptures as yet discovered of the temple." The President earnestly appealed to those present to do their best in enlisting the sympathies of all able to help forward a renewal of the enterprise. The cessation of his labours just at the time when he was expecting to find the most important remains of the temple, including the sculptured frieze and cornice, was a bitter disappointment to the man who had made for a noble end so many personal sacrifices, amongst them being his professional prospects as an architect. Roman remains of some interest to architects seemed to have been recently found at Bath, and the more important discovery of a Gallo-Roman city near Poitiers was reported from France.

Metropolitan improvements, decided on or proposed, were next passed in review. Below London Bridge the President strongly deprecated any other bridges, as tending to shift the world's commerce, which had made London what it is, to Blackwall, Gravesend, possibly to Southampton.

The new system of graded architectural competitions had been tried at Glasgow and Birkenhead, so far with success. At Glasgow there were some 140 primary candidates, from whom 10 were selected for the final struggle. At Birkenhead 130 sent in preliminary sketches, of whom 5 were selected for the final competition. In both cases the commission had been confided to the winner in the last trial of strength. Perhaps the most important competition abroad in the course of last year was that for the Berlin Senate House. The Institute should endeavour this session to bring to a practical conclusion its discussions on this head. From a list of British architects who had achieved successes during the past year were named Brock, Brandon, Blomfield, T. C. Clarke, Ferrey, Lainson, Low, Peebles, Phipps, Plumbe, Robins, Robson, Shaw, Verity, Vulliamy.

Turning hopefully to the opening session, their newly-instituted



examination might be trusted for the recruiting of their ranks, which would also continue to be swollen by ever fresh accessions of painters, sculptors, and other fellow-artists, through the Honorary Associateship, dating from 1877. And whilst knitting their bonds of amity with votaries of other arts, there was room, the President thought, for improvement in their relations with the Royal Academy, so far as concerned the Institute's friendly rivalry with the architectural section of that body. Did he trespass unfairly on dangerous ground by hinting that were that section placed under a more catholic *régime*, the Academy would be more popular with architects, without any loss to the public? One other all but vitally important matter that would have to be dealt with was the relative position of the metropolitan and provincial members of the Institute. The latter complained that whilst the burden of support fell on all alike, the benefits were not so equally shared, and accordingly demanded a conference. The President felt sure the Council would heartily welcome their country brethren to such a meeting, hear them with attention, and redress any proved grievances. The forecast of the session concluded with the expression of the hope that some of the forthcoming papers would prove interesting to the general public, as well as to the profession, instancing accounts of Cypriote, American, and Himalayan travel.

Mr. C. H. GREGORY, C.M.G. (Past President of the Institution of Civil Engineers), proposed a vote of thanks to the President for his address. He said he could look back some half a century to the time when, through the kindness of Mr. Donaldson, he had been allowed to attend the meetings of the Institute, a struggling body, which, though warmly supported, had not then attained its position as representative of so noble a profession. He would not attempt to follow the President through the different stages of his address, an address which he considered was typical of the distinguished architect who had delivered it. While the President had spoken much of others, he had been silent in regard to himself. The works completed under his direction were not perhaps so extensive as in past years, but it was not fitting that the records of the year should pass away without reference being made to the completion of a truly metropolitan work—the great markets at Smithfield—by the carrying out of the fish market; and though an engineer himself, he might speak of the skill with which the markets had been laid out, both above and below. The new Council Chamber at the Guildhall was another work he would mention; and though yet on paper, he believed it would do credit to its designer and be a noble addition to the buildings of the metropolis. He wished that the triumphal arch erected at the foot of Ludgate Hill on thanksgiving day for the Prince of Wales, and which for a time proved a most beautiful screen for a far less beautiful object erected by a member of his own profession, could have been perpetuated in stone. If it did not, however, occupy a place in stone, a representation of it had a favoured place in her Majesty's apartments at Windsor.

Professor T. R. SMITH seconded the vote of thanks, and observed the kind way the President had spoken not only of the dead but also of the works of living architects.

The vote having been formally put to the meeting by Mr. GREGORY, the PRESIDENT replied, and the proceedings terminated.

#### MR. F. MADOX BROWN ON ART EDUCATION.

AN address was delivered by Mr. Madox Brown on last week when distributing the prizes amongst the successful students at the Altrincham and Bowden Art Classes. He said—The subject of drawing for the people, which was now becoming a very prominent question in England, divided itself, it seemed to him, into two categories. The first category consisted of what was now called technical drawing as a branch of technical instruction generally, and all over Europe it seemed to be the opinion that a great deal of good might be done to the working classes by the spread of a sound knowledge of technical drawing, and it was of that kind of drawing he designed to speak chiefly on this occasion. The second category consisted of the teaching of drawing as an education, but not for the purpose of making artists. Now the idea prevailed over the Continent, and he thought in England also, that the two kinds of drawing were highly desirable. Education in both branches was already being carried on to a great extent in England, at South Kensington and elsewhere. There were schools in almost every large town where lessons in drawing could be had, but while the technical drawing there taught to the working classes might be of the greatest possible importance to the working man, it had in truth as little to do with real art as the first lesson in reading or writing had to do with writing a poem or a play. Nevertheless it was an important branch of technical education, and as such it also was important that it should be taught expeditiously—that no time should be lost in the teaching of it—for the workmen who wished to learn drawing had, generally speaking, but a limited amount of time at their disposal. They should not therefore be kept at any preliminary studies which might be done without. That was the very point that was being taken up at present by the Royal

Commission which had been sent to the Continent to study the subject of technical education. Professor Roscoe, the renowned Professor of Chemistry in Victoria University, who was one of the members of that Commission, in distributing the prizes at a school somewhere not very far from Altrincham, delivered a speech in which he noticed that drawing from the flat had been entirely given up in Government schools on the Continent. The question of whether pupils should be taught drawing from a small copy-book or from some round object had very little to do, he (Mr. Madox Brown) apprehended, with the ladies and gentlemen he was addressing, but it had a great deal to do with the workmen and children who were to be taught drawing. It was a very important matter to them whether they should spend two or three years in drawing from the flat, if it could be dispensed with. In connection with this point it was necessary to bear in mind that the object of teaching drawing as a study was not to teach the pupil to imitate other drawings, although that was a notion so prevalent in the public mind that it was a common thing for people to ask an artist where he got the model for his picture. Not very long ago a distinguished American gentleman, inspecting the pictures in the Town Hall of Manchester, asked him whether the cartoons from which the pictures were taken were got by contract, or how they were got. If drawing was wanted for any particular purpose, what was wanted was drawing from nature, and not copying the work of any other man. When one had been drawing a long time from the flat and began to draw from nature, he found himself very little more advanced than if he had not been drawing at all. On the Continent, it would seem from what Professor Roscoe said, they had given up this preliminary waste of time altogether, and in the speech already referred to he said that the Royal Commission on Technical Education would inform the Government of England that such was the case abroad, and that this waste of time would have to be done away with in England also. He (Mr. Madox Brown) did not pretend to object to Professor Roscoe's remarks. There was a great deal of truth in them. But objection might be taken to the way in which they were put; and some of the other statements the Professor made required modification. The fact that a learned professor of chemistry was sent to the Continent to study the question of whether it was desirable that a child should be taught drawing from a copy-book rather than from a leaf or something of that sort, and the fact that we had right reverend prelates condescending to favour us with their opinions about high art and the drama generally, and "Black-Eyed Susan" in particular, showed that the matter to which he was alluding was one that must be faced. Professor Roscoe seemed to have the idea that because he had seen in France what he referred to, it had always been in France. He (Mr. Madox Brown) had been born and educated on the Continent, and he could remember perfectly well that more than fifty years ago he was set to draw, not from the round, but exactly as in England now, from the flat—from lithographs and drawings. That was the system then followed, not only in France, but in Belgium and other countries. How long that system prevailed he could not exactly tell. Some thirty years ago a friend of his, an English artist who acquired some notoriety, conceived the idea of forming a school of drawing and modelling for the working classes in London exactly on the plan and principle which Professor Roscoe said prevailed so very much now on the Continent, and the adoption of which in England he now advocated. A large room was got and filled with casts; it was denominated "The North London Drawing School," and the classes were advertised as specially for the working people, who were told that they might come six days in the week and learn drawing and modelling. The teachers also attended gratuitously one or two nights in the week and gave instruction. He (Mr. Madox Brown) taught there for about a year and a half. One hundred and eighty pupils, male and female, were got together. No drawing from the flat was taught at all, and the results were very satisfactory. When he had not time to attend to it and gave it up, the school was handed over to South Kensington. After that there was established by the late Rev. F. D. Maurice in Great Ormond Street a working-man's college, at which he (Mr. Madox Brown) and several of his friends taught drawing, and he supposed that institution was still going on. There the drawing was conducted in the same way—with no drawing from the flat at all. The pupils, when able to draw from casts, were set to draw in water colours from the living model. Thus they learned to draw and paint, and got on well and rapidly. After these schools were started in England an attempt was made to discover whether schools of a similar nature existed in France, but none was found. He did not mean to say that on the Continent they had heard of the schools started in England and copied them, but when these things were in the air, one nation took them up, and others soon followed. Professor Roscoe ended by saying that a French painter whose name was exceedingly well known had said to him, "Your artists do not teach art in England, and your teachers of art are not artists." He (Mr. Madox Brown) did not know who that artist was. He knew a great many French artists who were quite capable of saying equally incorrect things, but he would like very much to know the name of the artist in particular who had made that observation. It was all very well



for the French artist to say that the English artists did not teach; but the question was, How did English artists learn? There were a great many artists in England. Was it supposed they were all heaven-sent, and did not need to learn anything? He held that the French artist, whoever he was, was in error. There was this difference between France and England, that in England pupils did not speak much of their masters. Very often the pupils received instruction as friends. He had himself instructed he did not know how many artists, but he did not speak of them as his pupils. In France, on the contrary, it was regarded as a point of honour that the pupil should proclaim his master on every possible occasion. He thought that technical drawing was valuable. If it did not lead to one thing it led to another. But as far as our manufactures, decorations, and patterns were concerned, it must be considered that there were no primary drawing schools in Greece or Egypt or Assyria; and in India and Persia, and those countries whence the most beautiful designs now came, the whole thing is learned as a business was—like a trade. So, if we had not had much primary drawing hitherto, perhaps we were not so very badly off in consequence. And as for the primary drawing that had been going on for thirty years or so in France, what had been the result of it? A French newspaper, against which he had no reason to be prejudiced—he had not seen it before—was sent him the other day. It was considered the leading art paper in France, yet it had pattern borders of a kind that would not be issued by a fifth-rate printing establishment in England, and altogether contained some of the worst ornamental work possible, and the publishers printed the name of the designer at the foot, as if the borders were something admirable. This was the result of all the technical drawing in France. In England, meanwhile, the firm of Morris & Co. had revolutionised decorative art. People might go to the St. James's Hall in Manchester and see the decorative art exhibited there, not only by that initiating firm, but by others which had since followed—Manchester houses some of them—and then they might go to the Continent and see if they could find anything like it there.

#### LEEDS ARCHITECTURAL SOCIETY.

THE first ordinary meeting of the seventh session of this Society was held on Monday evening. Mr. Jas. Barlow Fraser, the President, occupied the chair. Mr. W. H. Thorp (hon. sec.) read the annual report, which stated that the number of members was now much larger than a year ago, being seventy-eight as against seventy-one. There was still, however, room for improvement in this respect. The report proceeded to set forth the proceedings of the Society during the year. Reference was made to the presentation of a memorial to the Mayor and Corporation urging the desirableness of the Cloth Hall site being purchased for the building of a new post-office. Although nothing had yet been definitely settled, it was hoped that the obstacles which stood in the way of the purchase of the site for the new post-office would speedily be removed. The report was adopted, and it was agreed that it should be printed.

The President, in addressing the meeting, said he regretted that he could not refer in more cheerful and hopeful terms to the commercial outlook of their profession. Notwithstanding the enormous energy developed in the production of merchant shipping, which would appear to point to the increased circulation of wealth in the country, the more than fairly average harvest, and the briskness of many staple manufactures, there seemed still to be a lack of money for permanent investment and want of buoyancy in the building trades, and as a consequence they found themselves for the most part by no means so actively engaged as they should like to be. The returns of the Inspector for Buildings in Leeds and of the Building Committee of Bradford, showed very plainly and somewhat painfully that, although the population was increasing, the demand for house property was, instead of being on the increase, actually declining. In Leeds, during 1879, 1,721 houses were completed and certified for occupation; in 1880, 1,388; and in 1881, 1,012; for the present year the returns are 1,044. In Bradford a still more extraordinary diminution was shown, for whereas in 1877 the number of new dwelling-houses certified for occupation was 1,213, this year it was only 319, or little more than one-fourth. In Leeds, under the heading of miscellaneous buildings, the figures ran for the three years 886, 847, 905, and for the present year 852; at Bradford, curiously enough, under the same heading, there was a considerable increase, which they might try and regard as a hopeful sign for the future, particularly if they bore in mind the fact that a few years ago, when at the height of the great revival of trade in both districts, the building of houses was considerably overdone, and a number of those built in the Bradford district had never yet been occupied, though owing to the increase in trade a decided improvement was apparent. They might congratulate themselves on the likelihood of soon possessing a suitable building for their purposes, and of having at last a local habitation as well as a name. It had occurred to him whether it would not be desirable to arrange for a loan exhibition at some time; if taken up with spirit, and on a

sufficiently large and attractive scale to interest the general public, it ought to be a success. The advantage of technical exhibitions in the provinces was now universally admitted. Why should they not have a Yorkshire Exhibition of Building and Sanitary Appliances, together with a Fine Art Gallery devoted to design, not only in architecture proper, but also to all decorative arts? They could not be altogether satisfied with the result of their competitions amongst students. Considering the very generous and handsome way in which the older members of the Society came forward with their aid and encouragement, they ought to have had better results and more work to show. After referring to the evil of architects' assistants undertaking work without the consent of their employers, the President next alluded to the deaths of two of the most earnest and brilliant members of the profession, Messrs. Burges and Street; also to those of Messrs. Hansom and Somers Clarke. In the all-important matter of sanitary science good progress was still being made in many respects; but as regarded the vital question of the treatment of our sewers and drains it appeared to him that they were commencing their reforms at the wrong end. Instead of wasting ingenuity and money on complicated traps, which were almost always too small, and were often rendered useless by the higher temperature of our dwellings creating an upward draught, he ventured to think they should consider the desirability of inducing local authorities to ventilate the main sewers with large extracting shafts, specially constructed for the purpose, having a steady but not too powerful gas furnace, which might be regulated in a simple manner if the weight of the atmosphere should make it desirable. The very heated controversy on the question of rebuilding the old church at Headingley, or rather building a new church to replace the present one, had led to considerable feeling against the proposed disturbance of the ashes of the dead. For his own part, his sympathies were with those who would rather suffer inconvenience than desecrate the graves of their forefathers. Of course there were cases when sentiment must give way to downright necessity; but in this case there was no lack of sites for a new church, if the spiritual needs of the parish required one, and the old church might be kept *in statu quo*, and used, say once a month, to preserve its sacred character. No doubt the advocates of the cremation theory would point to this case as being a telling argument in their favour. The terrible stories of the ravages of zymotic diseases, of which they so frequently heard, in neighbourhoods where the graveyards abut on streets of dwelling-houses, must eventually call successfully for some energetic action in this matter. Another important public question was the housing of the very poorest of our working population. It was high time that legal powers should be granted to enable corporate bodies, or even private companies, to obtain dilapidated untenanted property, not at the ridiculous prices awarded by arbitrations, but at so low a price as to make the erection of new and improved dwellings on the sites thus obtained a remunerative speculation. Whenever a corporate body found it necessary to pull down the houses of the very poor, the erection of suitable dwellings, under careful superintendence, should be immediately undertaken, having at least as many rooms or tenements as were removed; and he would further suggest that the Corporation, backed by the Poor Law authorities, should build at any rate one block as an experiment, as they had almost unlimited borrowing powers, and the absence of any interest above what would be necessary to pay the Loan Commissioners would not be of consequence. There was also a field for very practical and useful benevolence on a large scale for some of our wealthy merchants and manufacturers; if they would find the money, he thought there would be no difficulty in getting excellent designs in competition. The President concluded by referring to recent improvements and discoveries in science.

A hearty vote of thanks was accorded to him at the conclusion of his address.

#### BIRMINGHAM ARCHITECTURAL ASSOCIATION.

THE annual meeting of the Birmingham Architectural Association was held on Tuesday evening at Queen's College. The President of the Association (Mr. J. J. Bateman) occupied the chair.

The Secretary (Mr. F. W. Franklin Cross) read the report, which stated that the committee could not regard the results attained during the past year as entirely satisfactory. They believed that every session ought to be opened with a large accession of new members, that the classes ought to be more numerously attended, and that the report from every branch of the association ought to present an improvement on that of the preceding year. The committee appealed to the ordinary members to use their utmost endeavours to procure additional members, and to work individually for the welfare of the association, thus rendering it more useful, more successful, and stronger numerically at the close of the ensuing session. The ordinary meetings held during the session were generally well attended, as also were the Saturday afternoon visits to buildings in course of erection. During the summer several archaeological and sketching excursions took place, and the large attendance at each was an evidence of their popularity. The



classes were joined by a fair number of members, and the amount of work contributed to the class of design was satisfactory, but in the other classes the work done was not equal to some previous sessions. The balance-sheet showed the receipts to have been 36*l.* 9*s.*, and the expenditure, including the balance of 12*l.* 8*s.* 7*d.* due to the treasurer at the last annual meeting, amounted to 41*l.* 1*s.* 8*d.*, thus leaving a balance due to the treasurer at the present time of 4*l.* 12*s.* 8*d.* Appended to the report was a syllabus of meetings to be held during the ensuing session, from which it appeared that various papers will be read on architectural and archæological subjects. The officers elected for the session were: President—Mr. J. J. Bateman; Committee—Messrs. W. H. Kendrick, J. Essex, F. G. Hughes, A. V. Ingall, V. Scruton, F. Simon, J. S. Webster, and E. Wood; Treasurer—Mr. A. Reading; Librarian—Mr. Norman Gething; Secretary—Mr. F. W. Franklin Cross.

On the motion of Mr. Kendrick, seconded by Mr. Gething, the report was adopted.

The President then delivered an address, in which he considered that portion of their professional practice connected with the duties of a surveyor. He divided the subject into, 1st, those duties immediately connected with the practice of an architect; and 2nd, those connected with the practice of a surveyor. Connected with the practice of an architect were land surveying and levelling, landscape gardening, development of building estates, and legal knowledge respecting easements, Acts of Parliament affecting building, law of contract, dilapidations, and fixtures. Connected with the practice of a surveyor were valuations of property, parochial assessments, and compensations. He made general references to those subjects, and noticed in detail the more important, to show the necessity of acquiring such a knowledge of them as might enable the students to pursue that portion of professional practice. With regard to landscape gardening, he said the judicious development of the grounds surrounding suburban residences, and more especially country houses, tended so greatly to heighten the architectural effect of the building that the study of landscape gardening was essential to the architect. As suburban gardens would perhaps to a large extent engage their attention, he advised them to place their house on a well-developed terrace, and not to attempt too much, or be too ambitious in the general plan of their garden, as the more simple the plan the more effective it would be. They must avoid unnecessary divisions, multiplicity of flower beds, numerous walks, and also vases and pedestals, excepting on terraces and in special situations. The surface of the ground would determine the character of the plan—if undulating, a curvilinear treatment would be most suitable, and if flat a rectangular plan. Without the special observance of aspect no garden arrangements would be successful; and the main approach or carriage drive should be planned so as to obtain the greatest amount of privacy. He next alluded to the development of building estates and legal knowledge, after which he referred to "easements," which, he said, were prescriptive rights acquired by time and use, the most important being that of light. There was no subject connected with the profession of an architect which was more fruitful of vexatious litigation than rights of window lights. As few buildings of importance could be erected in the centre of a closely-built town, the architect was considerably embarrassed by the obstructive interference of adjoining owners. A strict right of property enabled the owner to so much light and air only as fell perpendicularly on the land. In England a right of light in a lateral direction was protected, and called an easement, and after existing for twenty years it became an ancient light. The law permitted the opening of windows over adjoining land, but the adjoining owner could obstruct such windows within twenty years by an erection on his own land. He was of opinion that the repeal of the law permitting windows being opened over the adjoining land might be very profitably considered, as it admitted of an encroachment on the rights of adjoining owners, which by the lapse of time became an easement or legal right. It appeared to him to be a legal anomaly to admit a right to one party which might be cancelled by another, while at the same time it inflicted great inconvenience and expense and loss in so cancelling or making void such right. He reviewed the Acts of Parliament affecting buildings, and said it was to be regretted that in Birmingham they had not a comprehensive Building Act, which would relieve architects of considerable difficulty in dealing with party walls and other vexatious questions, while at the same time it would ensure the erection of more uniformly substantial property. He recommended the study of the Metropolitan Buildings Act, which regulated all building operations in the metropolis to secure sound construction and protection from the spread of fire. Town Improvement Acts, where they existed, were also necessary to be studied. As to the Artisans' Dwellings Act, he said that it might be fairly questioned whether the Corporation of Birmingham had legitimately used this Act in forming Corporation Street. He referred to that in order to correct any erroneous impression that the Act was intended to be used for the purposes of street improvement, instead of, as its name implied, for the improvement of artisans' dwellings. He spoke of the law of contracts, dilapidations, fixtures, parochial assessment; and in conclusion alluded to compensations, cautioning the students in the discharge of a surveyor's duties, and more especially in com-

pensations, never to undertake the advocacy of a case which they could not conscientiously support.

On the motion of Mr. R. B. Morgan, seconded by Mr. F. E. F. Bailey, a vote of thanks was passed to the President for his address.

### THE ROMAN VILLA, BRADING.

A STATEMENT has been prepared by Messrs. J. E. and F. G. H. Price, explaining the progress of the excavations at Morton, near Brading. They say:—The whole of the site being now the property of Lady Oglander, we have been enabled to remove the hedge which formerly separated the two estates. This obstruction is now cleared away, and in the course of the removal some interesting discoveries have been made; for example, a chamber paved with mosaic, adjoining those previously described as having tessellated floors. Originally this pavement was about ten feet square, but a portion only remains to indicate a geometrical pattern in varied colours, the main design having been destroyed, probably centuries since, when the liminary hedge was planted. In addition, and in a south-westerly direction, a way or passage, composed of a rough mortar or concrete floor, leads to a doorway, or piers of masonry indicating what may be presumed to be one of the entrances to the villa.

On the newly-acquired land a wing, or range of buildings, corresponding to those described last year, is in course of excavation; the chambers have yet to be developed, but they already define, with those referred to, the enclosure of a quadrangle of considerable extent. To the east of this some important structural remains have been unearthed, viz., an apartment, which, from the quantities it contained of fragments of fresco or wall-painting, must have been of a superior character. It had, judging from the tiles found and the remains of transverse flues, together with traces of the furnace, been warmed by a hypocaust, but in later times had been appropriated to quite a different use. Constructed within the area, and mostly put together with old materials, are some singular structures, resembling kilns or ovens, which had been adapted to domestic or manufacturing purposes, and serve to illustrate the prolonged occupation of the place. Near to these is an interesting square of masonry in good condition, the walls formed of flint boulders, in regular order, and the corners of well-squared blocks of native stone. In the centre is a bath or cistern some five or six feet long, and paved with slabs of stone; it is lined with salmon-coloured mortar, a neat fillet running round the base and up the angles of the bath; a drain or outlet, in fair condition, still remains *in situ*. This bath or tank appears to rest on a suspended floor; adjoining are some interesting examples of the form of drainage selected for the respective buildings.

These remains, as interesting to many as are the mosaic floors, are enclosed in an area of about 50 feet square, and as already the effects of the late continuous rain is a matter for anxiety, we purpose covering in the whole ere the frost set in; but the necessary expense is very heavy, and we must trust to external help. The gate-money taken during the summer season, while sufficient for ordinary working expenses, is totally inadequate to the responsible task of covering in and protecting what is found with substantial sheds, so constructed and arranged as to be at all times open to public inspection. Subscriptions therefore are needed. The managers of the Capital and Counties Bank will take charge of any sums forwarded to their branches at Ryde or Sandown, or they may be confided to the care of Messrs. Child & Co., Fleet Street.

Of additions to the museum we may refer to a richly-ornamented vase of Durobrivian pottery, unfortunately broken, pateræ and cups of dark grey ware, a series of bone counters suggestive of Saxon influence, lock furniture in iron and bronze, a silver coin of Trajan, and many miscellaneous objects.

**Gorton, Manchester.**—A large block of general offices is now being erected for Messrs. Beyer, Peacock & Co., the well-known engineers, at Gorton Foundry, opposite the Manchester, Sheffield, and Lincolnshire Railway Works. The building occupies an area of 224 feet by 44 feet, by about 42 feet in height, and will be faced with red pressed bricks, having moulded arches and cornices, stone string-courses, cappings, &c.; and all the internal woodwork will be of pitch pine varnished. It comprises a very complete range of private offices, a large office for clerks on ground floor, 70 feet by 40 feet by 16 feet high, with separate room for cashier and fireproof safe; and on first floor a general drawing office 90 feet by 40 feet by 24 feet high, with open roof and glazed central double light in addition to the side windows; also a separate tracing office, photographing room, model room, &c. Arrangements have been made for warming and ventilation on Messrs. Haden's system, for which a special smoke and ventilating shaft is provided at one end, rising to a height of 80 feet, and at the other end of buildings will be a clock tower 90 feet high. Messrs. T. Bates & Co., of Droylsden, are the general contractors for the work, which is being carried out according to plans and directions of Mr. Thos. Worthington, F.R.I.B.A. and Mr. John G. Elgood, A.R.I.B.A., architects, 110 King Street, Manchester.



## NOTES AND COMMENTS.

MR. ROBERT LACON SIBLEY, District Surveyor of Clerkenwell, died at his residence, No. 39 Great Ormond Street, on Saturday evening, October 28. About two years ago he inhaled poisoned air in a cellar visited in the course of official duty, and though before that enjoying sound health regularly, his blood seems to have been affected, and as a result tumours appeared, particularly in the neck, which at last broke into the windpipe, and caused his death by suffocation. He was appointed to the district on the death of his father, Mr. ROBERT SIBLEY, a well-known architect and surveyor, who died in 1849, after having held the offices of County Surveyor of Middlesex, Surveyor to the Ironmongers' Company, as well as that of District Surveyor. Mr. R. L. SIBLEY was elected an Associate of the Royal Institute of British Architects in 1849, and a Fellow in 1861.

IN measuring land in Ireland three measures of acreage are recognised, viz., Statute, Plantation, and Cunningham; the statute acre being the smallest of the three. It is sometimes difficult to ascertain, when dealing with leases and other deeds, which of them was adopted. In the Dublin Appeal Court on Tuesday a case was tried relating to a will by which 45 acres were demised. The witnesses said that the testator meant Irish plantation acres, but the Lord Chancellor and Lords Justices decided that the word acre must be taken to mean statute acre.

THE awards in the yearly Jauvain d'Attainville competition have just been published. The members of the jury were MM. CABANEL, ROUX, GALLAND, LÉVY, and MAILLART. The prize for historical painting (subject *Les Trois Parques*) is carried off by M. DUDICOURT, a pupil of M. CABANEL; while MM. BASCHET and THOMAS, pupils of MM. JULES LEFÈVRE and BOULANGER, receive mentions. In the competition for landscape the prize was unanimously awarded to M. RECIPON, pupil of MM. DUMONT and FRANÇOIS; M. CAMBROGLIO, pupil of MM. LEHMANN and HERBERT, and M. DELBOS, pupil of M. CABANEL, obtaining honourable mention.

THE authorities of the Louvre have just replaced in the Apollo Gallery the *châsse* or chest containing the relics of St. POTHENTIN, the martyr, which was concealed during the Franco-Prussian war. This chest, which dates from the twelfth century, and was found in an old monastery on the banks of the Rhine, is in a perfect state of preservation. The work on it is remarkable. It is made entirely of Eastern woods, which were precious at the epoch of its construction, and is entirely covered with silver-gilt plates, inlaid with uncut stones at the corners and projections. The Twelve Apostles are represented in relief on the two sides, and at one end the saint is to be seen wearing a coat of mail and accompanied by two acolytes.

THE Committee of the British Association have appointed a committee for the exploration of the ancient camps in Epping Forest. It has been found that on both sides of the Thames "dene holes" exist which date from a time when the art of building can scarcely be said to have existed in this island, and when invisibility formed the best security against the sudden attacks of an enemy. In Essex "dene holes" are abundant in the district between East Tilbury and Purfleet. In Kent they are especially abundant near the old settlements, or sites for settlements, on the river, at Greenwich, Woolwich, Erith, and Greenhithe. Their position, one, two, or three miles from the river, and their concentration in spots about the same distance from the natural sites for settlements on the Thames, seem to suggest that they were used both as storehouses and as places of occasional refuge from pirates who might attack the villages on the river bank. It is proposed to explore the Essex "dene holes" when the work at the Loughton camp is completed.

A NEW room will shortly be opened at the Cluny Museum. It is to be entirely devoted to the fine collection of shoes, boots, &c. (*chaussures*), of all ages and nations, got together by the late JULES JACQUEMART, and which for want of space has not yet been exhibited. The new room is on the first floor, next to the armour galleries, and will be hung with the famous Boussac tapestries belonging to the Museum, and now being repaired.

THE annual exhibition of paintings in Kirkcaldy was closed on Tuesday. It was announced that the season had been successful, paintings to the value of 900*l.* having been sold. A speech was delivered by Sir COUTTS LINDSAY, in which he referred to the progress of industrial art in this country. In pottery the French had been beaten out of the field in England, and a very large amount of the finer works in pottery were sold in France and Germany. Not only was that the case in pottery, but it was also the case in lacework, English patterns, he said, being highly appreciated all over the Continent.

DR. LYONS, who is one of the members for Dublin, has tried to set aside the result of the late competition for the Museum in Dublin by suggesting to the Treasury that the question of the site should be reconsidered. It is a very primitive sort of tactics to object to a site when all other means have failed, and in this case Dr. LYONS could hardly expect to succeed. The people of Dublin should have pointed out the defects of the site long ago, when the Government scheme was first proposed. It is too late now to become zealous about securing the best possible arrangement. If the competition had been originally restricted to architects living in Dublin, no objection would have been raised in England; but as it was an open competition, the conditions must be strictly observed. The twentieth clause of the particulars furnished to architects stated that "the committee of selection shall report to the Treasury upon the five selected designs, and the Treasury will select the author of one of them to execute the new building as architect." With this before them, it is unworthy of the Irish architects to act as they are now doing. They failed signally in the competition, and they cannot expect a series of experimental competitions to be initiated in the hope that in some remote period one of their countrymen may succeed in winning a place.

LAST week a largely-attended meeting of the carpenters and joiners engaged in the Paris building trade was held at the Salon du Pont d'Austerlitz to debate and agree upon the demands to be addressed to the masters for an advance in wages, diminution of working hours, and other changes in the conditions of labour. After considerable discussion it was decided that the working day should be fixed at ten hours both summer and winter; that overtime should be suppressed as far as possible; that the rate of wages should be 80 centimes per hour; that men, taken out of their district for temporary work should receive 2 francs extra per day as *dérangement* money; that so-called special work should be paid 1 franc instead of 80 centimes; and finally, in case of pressing and exceptional jobs where overtime is absolutely necessary, it shall be counted at the rate of 1*fr.* 20*c.* per hour (time and a half) for the first two hours, and 1*fr.* 60*c.* (double time) for all hours after. These demands will be immediately brought to the attention of the Masters' Chambre Syndicale, and in case they should be refused, an extensive strike is likely to ensue.

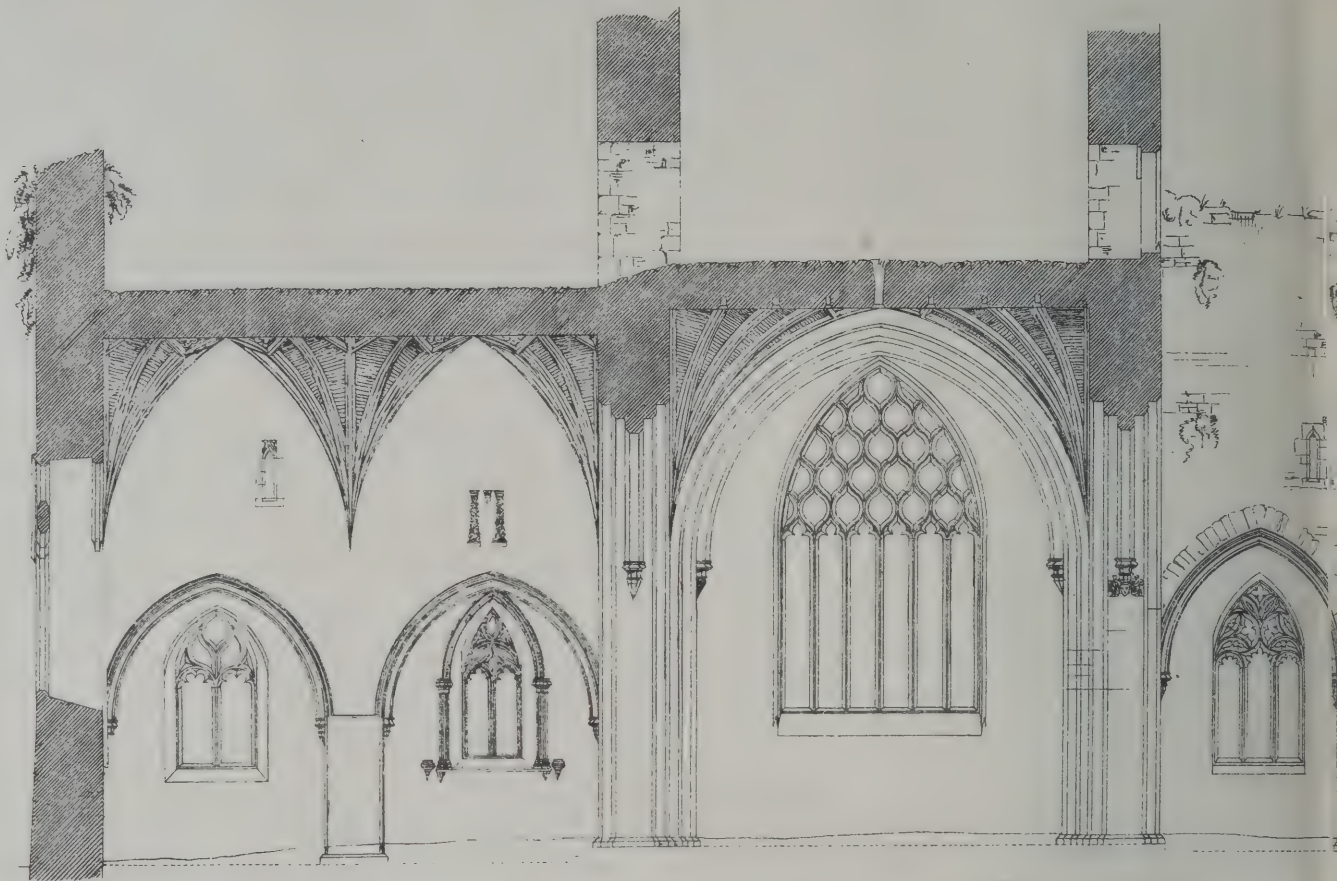
MR. MATORELL Y PENA, a citizen of Barcelona, has founded a prize of 20,000 francs for the best work on Spanish archaeology, to be competed for every five years by archaeologists of all countries, with the sole restriction that the papers sent in must be written either in the Spanish or French language. The prize will be awarded for the first time on April 23, 1883.

THE works that are being executed for the reconstruction and extension of the Paris Ecole de Médecine are for the moment almost completely suspended. Owing to the demolition of the buildings formerly occupied by the Clinical School of Midwifery, the space lying between the Rue Monsieur-le-Prince and the Boulevard St.-Germain is transformed into a vast building yard, which, although crossed by the Rue de l'Ecole de Médecine, has the appearance of a town that has been given over to fire and pillage, as, owing to the blocking up of the street, the only passers-by to be seen are the medical students climbing across the heaps of rubbish and materials on their way to and from lectures. The new buildings, the principal façade of which on the Boulevard St.-Germain will have a frontage of nearly 400 feet, are already up as far as the first floor, the iron joists of which are in position. They will extend back right to the Rue Monsieur-le-Prince, where, owing to the higher level of the soil at that side, the entrance from the street will open on to the first floor. Orders have been given for the immediate resumption of the work, which will be pushed on henceforward as speedily as possible.

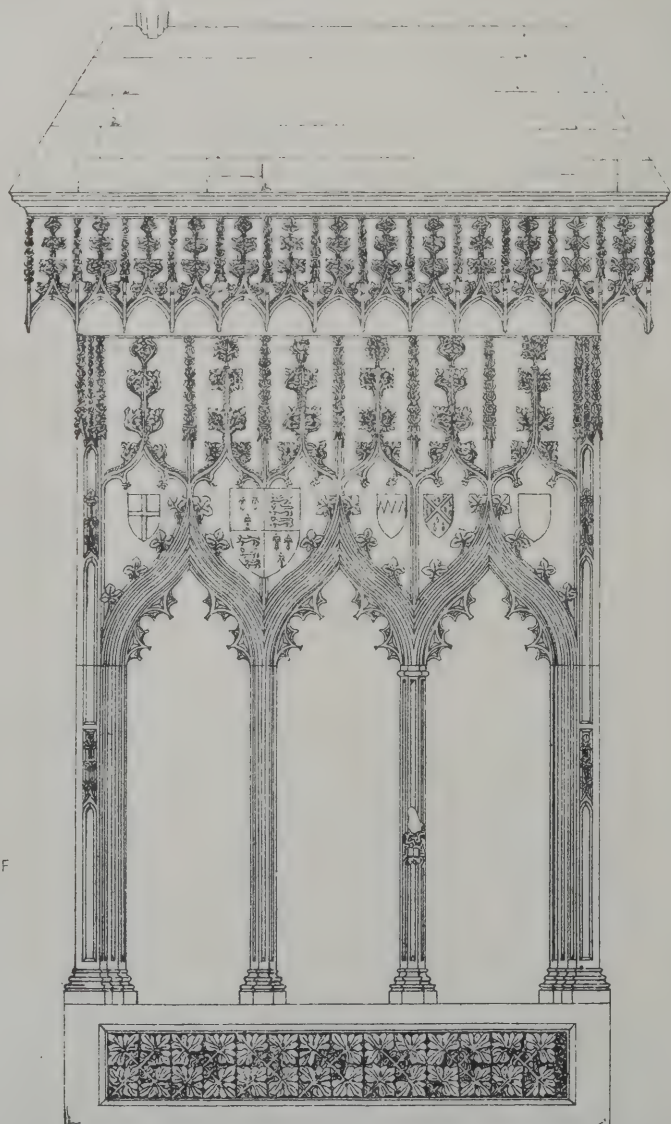






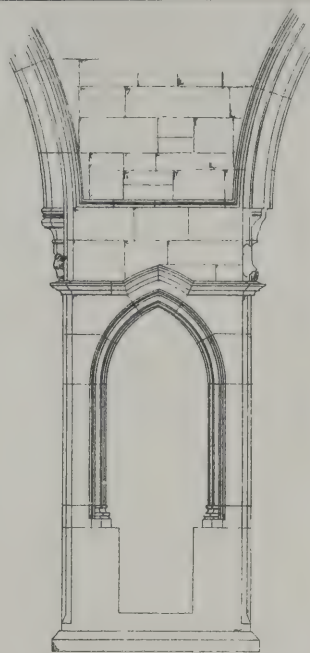


TRANSVERSE SECTION THROUGH TRANSEPTS [LOOKING EAST.]

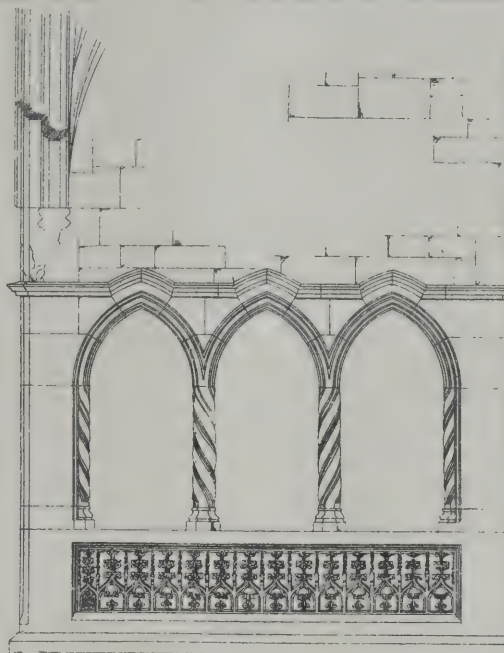


ELEVATION OF  
SEDILIA.

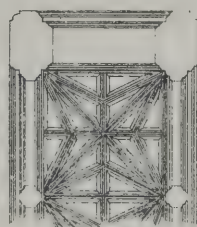




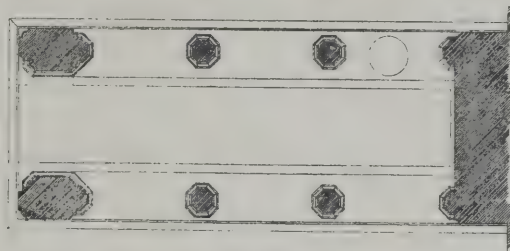
FRONT



ELEVATION OF SIDE.



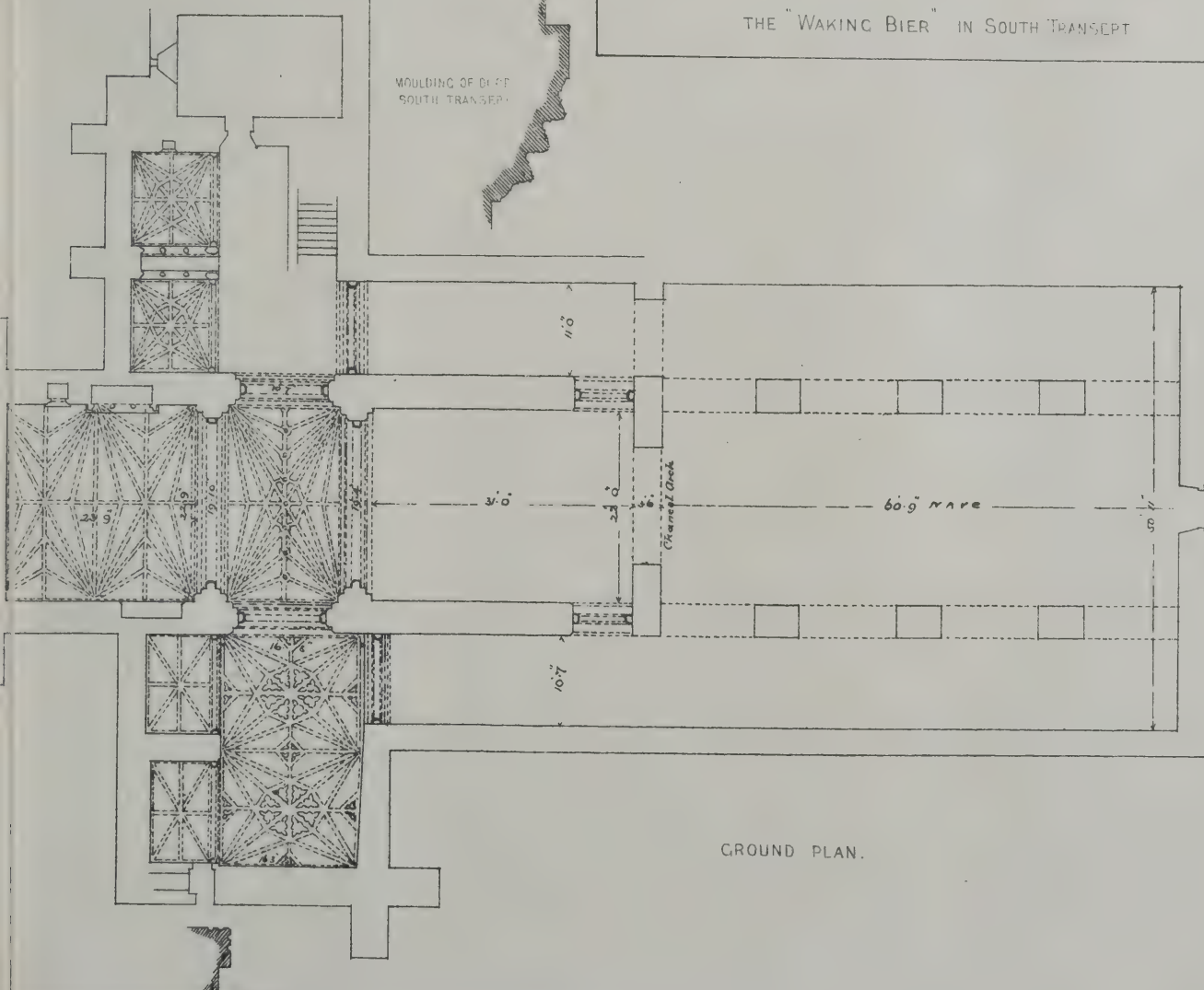
PART OF CEILING.



PLAN.

THE "WAKING BIER" IN SOUTH TRANSEPT

MOULDING OF DIRT SOUTH TRANSEPT



GROUND PLAN.









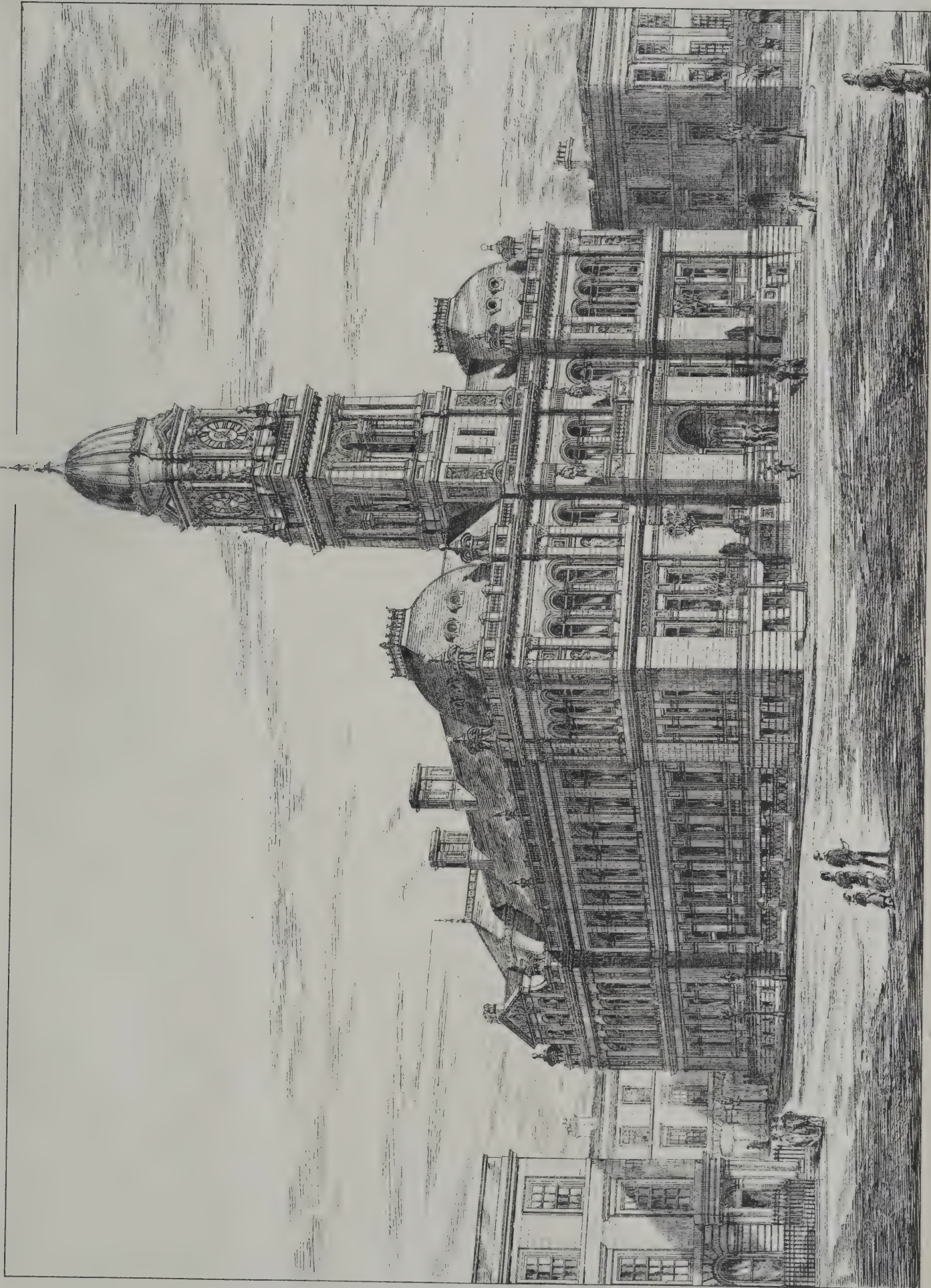




Designed by C<sup>o</sup> 22, Mark Lane, Cannon St. E.C.

THE WOODLANDS, GILDERSOME, LEEDS.  
WALTER HANSTOCK ARCHA ARCHITECT





DESIGN FOR THE TOWN HALL, BIRKENHEAD.  
BY EDWARD BIRCHALL F.R.I.B.A.

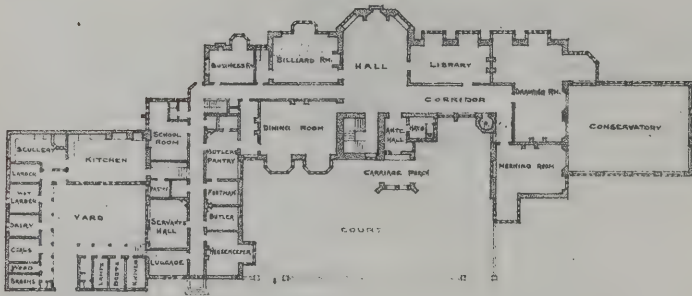












GROUND PLAN





pl. II. 1882.

BUCHAN HILL, SUSSEX.  
for P. SAILLARD ESQ.  
ERNEST GEORGE & PETO ARCHT.









## ILLUSTRATIONS.

BUCHAN HILL, SUSSEX.

THIS mansion, which is situate about three miles from Crawley, is in course of erection for Mr. P. SAILLARD. The main building is arranged round a fore-court, one side of which is formed by a tall wrought-iron enclosure and gates. Entering the house from a carriage porch, a lobby leads into the hall, 40 feet by 28 feet. It is oak panelled, a portion being lined with the local Barnsnpap stone, and occupies the height of the two storeys. At one end is a hooded chimney between lofty windows; the other end is spanned by an arcaded oak gallery, which is part of the first-floor corridor. On one side of this hall are placed the drawing-room, morning-room, &c., principally used by the ladies; on the other side being the library, billiard-room, and dining-room—the latter being also approached by the servery contiguous to the offices. Near to the offices, and by a garden entrance, are the business-room and school-room, with lavatory, w.c., &c., for use of the children. The grand staircase of oak is in the tower, the newels being carried up as posts, the spaces being arcaded. Near the drawing-room and morning-room is a circular turret-stair leading to Mrs. SAILLARD's boudoir, bedroom, &c., which occupies one wing of the building on first floor. The kitchen is lofty, with an open roof and domed lantern-light for ventilation. The offices are arranged round a kitchen-court. All these are lined with white glazed bricks. The open arches beneath the coupled gable form an open loggia to a large play-room adjoining the nurseries. There is a basement under one wing containing cellars, &c., the remainder of the building being excavated sufficiently to admit of all the chimneys being swept from below. The picturesque tower above the main staircase provides large water-tanks for the supply of the house, a belvedere above this being reached by stairs in the octagonal turret. The walls are of red brick with dressings of Ham Hill stone; the roofs are of red tile. MESSRS. ERNEST GEORGE & PETO are the architects, and the contractor is Mr. MARK MANLEY, who took the work at 45,000*l.* in competition.

## DESIGN FOR TOWN HALL, BIRKENHEAD.

THE accompanying illustration is a design submitted to the Town Hall Competition for the borough of Birkenhead by Mr. EDWARD BIRCHALL, F.R.I.B.A., of Leeds. It was intended to harmonise with the contiguous buildings and carry out the issued restrictions. The ground-floor has the main central entrance to the front, and two other entrances, one of which would be a covered way to carriages. To the right of the main entrance would be the Town Clerk's offices, with gas and water offices behind; to the left, the Borough Treasurer's offices, with Borough Surveyor's, &c., behind. On the first floor to the front would be the Mayor's apartments *en suite*, fitting up to the Council Chamber, also on the same floor; the large hall, 70 feet by 50 feet, with attendance and committee rooms, with plenty of staircase and landing accommodation, and all the corridors would be well lighted.

## THE WOODLANDS, GILDERSOME, NEAR LEEDS.

THE house and premises shown in the illustration belong to Mr. GEO. WEBSTER, manufacturer, of Gildersome and Leeds, and a member of the Leeds Town Council.

The grounds and park, which are away from the village, are 23 acres in extent, falling gradually to the south, which is bounded by a small run of water and a wood behind it.

The house has dining-room (24 feet by 16 feet 6 inches), hall (10 feet wide), drawing and breakfast rooms, front and back kitchens, pantries, lavatory, &c., on the ground-floor. On the chamber and attic floors there are ten good bed-rooms, closet, w.c., rooms for bath and lavatory, which is fitted up with the ordinary slipper bath for hot and cold water, steam bath, douche bath, and circular-needle bath. The room has a fireplace, and in addition has a small heating apparatus for winter, supplied from the kitchen fire.

The material used for external walls is the best Delph stone all round, with hard white ashlar dressings. Pitch pine is used extensively in the inside, and the whole of the woodwork in the dining-room is in solid mahogany, French polished and picked out in black; and the suite of furniture for this room is in mahogany to match, and of the same period as the house, specially designed by Mr. CHARLES MILLS, of Bradford. All the reception-rooms have ceilings divided into small panels and well filled with ornament.

The outbuildings comprise stable, loose box, harness-room, coach-house, wash-house, lodge for coachman, garden-house, conveniences, billiard-room, 32 feet 6 inches by 18 feet, and 13 feet high. The court-yard of house and stable-yard are quite separate, and the latter cannot be seen at all from the kitchen.

The vineries are 120 feet long in one line of buildings, being divided internally into four 30-foot houses, specially arranged for early and late grapes. The other greenhouse buildings are about 60 feet long. One peculiarity of this horticultural scheme is that the firing-shed is 100 yards or more away from the glass, and the pipes are laid under ground.

The grounds are just about on the point of completion, although Mr. WEBSTER has been living in the house over twelve months.

The works have been carried out from the designs and under the supervision of Mr. W. HANSTOCK, A.R.I.B.A., of Batley, by local builders.

## HOLY CROSS ABBEY, CO. TIPPERARY.

THE Abbey of Holy Cross was one of the most beautiful in Ireland. It was founded by King DONAGH O'BRIEN, who died in 1241, for monks of the Cistercian Order. It was a "cell," or daughter church, of Furness Abbey. Among the features for which the abbey is distinguished are the careful detail; the exquisite sedilia, commonly called a tomb; the shrine of the Holy Cross, called the Waking Bier; and the beautiful tracery of the windows. The nave is 60 feet 9 inches long by 50 feet 11 inches wide, inclusive of the aisle. The choir is short, with elaborate groining; four finely-wrought arches support the tower. The transepts have spaces for four altars, two in each. The shrine of the Holy Cross divides the two chapels in the southern transept. The choir of the abbey really extends from the eastern end to a point 31 feet west of the tower, this, as at Ross Abbey, being cut off from the main body of the nave by a solid wall. The canopy of the sedilia is decorated with the shield of HENRY IV. after his accession; in the first and fourth quarterings being only three "fleurs-de-lys," styled France modern, distinguished from the shield "semée-de-lys," or France *ancient*. The following description of Holy Cross is from a paper by the late Rev. J. L. PETIT:—

The abbey is of the Cistercian Order, and though most of the remains are rather a late Gothic, very similar to the French Flamboyant, the Cistercian type and arrangement is preserved as fully as in specimens of the twelfth century. The central tower is low and massive and of an oblong plan; its parapet has disappeared. It has a short choir or chancel, and north and south transepts with two eastern chapels to each. Those of the southern transept, instead of being divided, as usual, by a solid wall, have between them a screen of two arcades on shafts enriched with a spiral moulding. The space between them seems to have been intended for a monumental figure. The arches are pointed, and apparently of a late date. In the chancel are rich sedilia, or else a tomb occupying their position, having a little of the character of Late Perpendicular (the true Perpendicular does not, I think, exist in Ireland), and consisting of three tall arches under a horizontal cornice of delicate work. The tower compartment, the chancel and north transept, are groined with ribs, but no bosses at the intersection; above them are rooms. The east window has six lights, which are trefoiled; but the tracery above, which is reticulated, has no foliation. Some of the smaller windows have Flamboyant tracery with foliation, and some without. The nave is of good length, but divided by a partition at the distance of about a square from the intersection. This partition, which does not extend across the aisles, is pierced by a plain pointed arch of a single square order, and terminates with a gable, so as wholly to cut off the eastern from the western part of the church. Probably one was conventual, the other parochial, as at Wyndham, Boxgrove, and other places. The pier arches of the nave are of one square order, very plain, pointed on the north side, and round on the south. The piers also are plain and square; in fact the nave has few architectural features by which its date may be determined, for the absence or narrowness of the chamfer is no proof of an early style in Ireland, as it occurs in the latest Gothic. A small lateral door presents the only remains of twelfth-century work. The abbey buildings are on the south side, forming the square between the nave and transept, and extending to the south-east. There are no remains of the cloister arcade, if any existed; but one or two of the doors opening into the space are rather curious.

Holy Cross Abbey is now in charge of the Commissioners of Public Works, and under the direction of Mr. T. N. DEANE, R.H.A. The following repairs were carried out during last year:—The tombs have been relaid, and the general floor of



the abbey levelled, the walls in parts pointed with cement, the parapet of the main tower repaired, upper surfaces of groined arches coated with concrete, tracery secured, buildings built against the abbey removed, *débris* and earth taken away from the bases of the walls, broken and missing quoins replaced, arches put in where walls were in danger, mullions replaced where tracery might have fallen, cut stone collected and stored, several of the cloister arches rebuilt on their old foundations, casts taken of the most interesting corbels and other carved stones.

### THE HAMILTON MANUSCRIPTS.

THE *Times* of Saturday says:—A large number of our readers will learn with much regret that the information telegraphed by our Berlin correspondent on Wednesday is but too true, and that the entire collection of valuable manuscripts formed by Alexander, tenth Duke of Hamilton, has become the property of the German Government, and is already lodged in the Königl. Museum at Berlin. The negotiation was completed about ten days since by Dr. Lippmann, the curator of the Fine Art Museum, with the assistance of Messrs. Ellis & White, of New Bond Street.

The MSS. may be divided into three classes—first, those which are specially valuable from an artistic point of view; second, those which have a particular antiquarian and critical value; third, those whose interest is historical and literary. Above all others in the first class must be mentioned the manuscript of Dante's "Divina Commedia," written in the fifteenth century, and illustrated with upwards of eighty drawings by the hand of Sandro Botticelli. This priceless volume may without exaggeration be described as the most valuable manuscript in existence from its artistic interest, for it stands alone as an example of a literary work of the first order illustrated by an artist of the highest rank.

Next may be mentioned a Missal executed for Pope Clement VII. shortly before his elevation to the Pontificate. This splendid volume is esteemed as the work of the exquisite but almost unknown artist Antonio da Monza, who flourished at Milan at the end of the fifteenth and beginning of the sixteenth century. The calligrapher was Ludovico Vicentino, well known to bibliographers as the author of a work on the art of which he was so great a master. The illuminations consist of 13 large and 19 small miniatures, besides 28 full-page borders of surpassing beauty of execution. The whole volume is in perfect preservation, and in its original binding. Another truly splendid volume is a Bible of the fourteenth century, decorated with 297 exquisite paintings, besides 127 smaller miniatures, and 130 richly-illuminated borders. This grand book possesses the unusual distinction of bearing the name of the artist, John of Ravenna, which is thus given on the last leaf:—

Hujus Biblie scriptor  
Eterne sit vite possessor  
Cujus nomen habetur,  
De Ravenna Magister Johannes.

Another splendid and truly royal volume is the works of Horace, written and illuminated in the first years of the last decade of the fifteenth century for Ferdinand I. King of Naples. This beautiful book is attributed to Marco Attavanti, Miniatore Toleo Ten. A Psalterium of the eleventh century is a volume of extreme interest for the early history of art, containing as it does 200 drawings in colours of a remarkable character.

Petrarch has been much more frequently than Dante the subject on which miniatori have delighted to exercise their art, and the former of this collection was happy in securing one of the finest ever made. It is a large folio volume containing the poems of Petrarch, with the Commentary of Francisca Philelpho, and it was under the care of the commentator that this superb MS. was completed. It has twelve gorgeous pages, the subjects being enclosed within borders of very beautiful design of the Florentine school of the fifteenth century.

Among the French MS., "Les Illustres Malheureux de Jean Boccace" is specially remarkable, both for the beauty of its execution and its perfect condition. It is enriched with eighty-four miniatures, nine of which are of a large size, and the whole of them finished with consummate skill. This noble work is dated 1409.

The "Roman de la Rose" is a work of which a very large number of manuscripts exist, but probably no other surpasses that contained in this collection for the number of the miniatures—no less than 100—or the delicacy of their execution. This beautiful book is esteemed to have been made little, if any, later than the lifetime of the author, Jean de Meun, who died in 1364. A French translation of Diodorus Siculus is remarkable as being the identical copy presented to Francis I., with his monogram impressed on the sides of the binding. The first page represents the King seated on a throne, surrounded by his courtiers and his three sons (the Dauphin Francis, afterwards married to Mary, Queen of Scots; Henry, afterwards Henry II. of France; and Charles, Duke of Orleans). The painting is a *chef-d'œuvre* of the French art of the period, from its perfect finish, and the detail is carried out with the greatest minuteness.

In such a library of manuscripts we naturally expect to find

some fine specimens of that favourite work on which illuminators were so wont to spend their best efforts—viz., the "Hours of the Blessed Virgin." There are no less than twenty-seven examples of this book, several of which are of unusual beauty and excellence. A French "Heures à l'usage d'Anges" is indeed a gem of its kind, ornamented with thirty-eight miniatures of exquisite finish. This volume belonged to the library of the Cardinal de Soubise, and is described on the fly-leaf as "Superbe manuscrit le plus beau de la Bibliothèque de Soubise." It is in the old red morocco binding, with the Soubise arms on the sides and back. Another manuscript of the "Horæ Beatæ Mariæ Virginis," though coarse and rude in its execution, has a great historic interest from having been executed for Isabella of Scotland, daughter of James I. of Scotland, married to Francis I., Duc de Bretagne, October 30, 1442. The first miniature represents the Duchess Isabeau on her knees, the robe biparted with the arms of Brittany and Scotland. Between the Office for the Dead and the Hours of the Angels, the scribe had left seven pages blank, which are filled up with prayers in the autograph of the Duchess Isabeau herself. Another volume of a similar character but of surpassing beauty of execution, is an "Officium Divæ Mariæ Virginis," adorned with twenty-nine very beautiful miniatures by an Italian artist, or possibly by a French artist who had studied in Italy. Independently of the beauty of the paintings, this book is altogether so daintily got up, the vellum of the finest texture, and the preservation so spotless, that it might have been completed but yesterday. An exquisite binding by Derome, with dentelle borders on the sides, makes this splendid volume all that can be looked for in such a book.

The foregoing articles do not by any means exhaust the works of interest in the first division, the difficulty being rather to choose from among so many which to describe, than any lack of others worthy of description.

In the second division, first and foremost we must regret the loss to this country of a volume which came here under circumstances of the highest interest, and which we lose again after an interval of a little more than 350 years. This is nothing less than a manuscript of the Gospels in Latin, dating from the seventh century, and written in golden uncial characters on purple vellum. It is said that only three or four examples of such manuscripts are known; but what gives to this one so great an interest and value is the fact that it was presented to Henry VIII. by Leo X., on the occasion of conferring on him the title of Defender of the Faith. On the first page is the following inscription, in letters of gold, surmounted by the royal arms of England:—

Fato servatus tibi sum ter maxime princeps,  
Te quoque servarunt aurea fata michi;  
Instaurata nitent per te sacra Dogmata heri;  
Aureus est author Christus ubique meus."

A Psalterium of the ninth century presents a peculiarity very rarely found. It is written in double columns, on the left side the Greek and on the right the Latin; but that which is most noteworthy about it is that the Greek text is written in Roman characters, thus helping us to a knowledge of the pronunciation of the Greek language at the time when the Byzantine Empire was in its literary glory. The date of the execution of this venerable manuscript is discovered in the Greek inscription in capital letters prefixed, showing that it belonged to the Monastery of St. Ambrose at Milan, when Peter II. was abbot, who was created in 856 and died in 897. Another Psalter, second in interest only to the foregoing, is a folio volume dating from the seventh century, and known as the "Psalterium Sanctæ Salabergæ." The writing is in uncial characters, and was done by the hand of the Abbess St. Salaberge, who died in 655, for the use of the nuns of St. Jean Baptiste de Laon. In the Creed are three remarkable variations from later versions, viz.:—(1) "Natum ex Patre;" (2) omitting "Deum ex Deo" before "Lumen de Lumine;" (3) "Spiritus Sanctus ex Patre procedens," not "ex Patre et Filio." This venerable manuscript, more than twelve hundred years old, is in perfect preservation.

"Biblia Latina"—a grand manuscript of the tenth century. An inscription informs us that it was written by Aldibaldus, the monk, by command of Gulielmus, the abbot. The former name leaves little room for doubt that the manuscript is of English origin. The once warmly-disputed text of the three heavenly witnesses, 1 John v. 7, finds no place here in the text, though a much later hand has inserted it in the margin.

A copy of the Gospels in Latin of the eighth century, from the library of the Benedictine Monastery at Stavelot, in Belgium, is beautifully written in the characters known as "Minuscules Carlovingiennes." The beginning of each book is executed in letters of gold, and the first page of each Gospel is decorated in the style of the celebrated Missal of Charles le Chauve, preserved in the National Library at Paris.

"Evangelistarium sive Evangelia IV. per Anni circulum." A Greek manuscript of the eleventh century, richly decorated with thirty-three miniatures by a Byzantine artist, painted in vivid colours on a gold ground.

Among the manuscripts of historic interest the foremost place is occupied by a collection of English State papers relating to the history of England and Scotland between 1532-85. It comprises upwards of 1,200 documents and autograph letters, including



several in the hand of James V. of Scotland and Queen Margaret, sister of Henry VIII., and others from nearly all the statesmen who moved in that important period of our history. We have reason to believe that it is not even now too late to secure these important papers for this country.

### GLASGOW INSTITUTE OF ARCHITECTS.

**A**N extraordinary general meeting of the Glasgow Institute of Architects was held on the 3rd inst., to consider the new Police Bill. Mr. James Thomson, F.R.I.B.A., President of the Institute, occupied the chair.

Mr. Wm. Maclean, writer, the secretary, read the report of the Council of the Institute on the Police Bill. The report was as follows:—The Council of the Glasgow Institute of Architects having considered the sections of the new Police Bill from 307 to 392 inclusive, relating to the jurisdiction and procedure before the Dean of Guild Court, Master of Works, his powers and duties, streets and courts, sewers and buildings, their erection, alteration, and use, are unanimously of opinion that these sections should be omitted from the Police Bill, and that all necessary building regulations should be embodied in a Building Act applicable not merely to the city, but also to the suburbs. The growing need for such an Act to regulate building operations in this large city has been apparent to the architects of Glasgow for many years. In 1878 and 1879, in particular, the subject was discussed at numerous meetings, and a deputation from the Institute had several opportunities of conferring with a committee of the Town Council which had this matter under consideration. At that time it seemed probable that the different municipalities would co-operate with the view of promoting a general Building Bill applicable to the whole of Scotland—a course which the Institute warmly approved and recommended—but the scope of the measure now under consideration proves that the Town Council has entirely abandoned all idea of proceeding with a Building Bill either in conjunction with other corporations or separately. Instead of that they propose to mix up building laws with the miscellaneous provisions of a Police Bill, in such a way that the original mistake of so doing shall be perpetuated and aggravated. But if time for due consideration be allowed (and your Council can imagine no valid reason for precipitation), the opportunity seems favourable for taking up this matter in an impartial spirit, and the Council recommend that the Institute should give expression to its opinion on the subject, and use all competent means to convince the authorities and their fellow-citizens of the urgent need which exists for a complete revision and codification of building regulations. If the course which the Council recommend—the substitution of a separate Act for the clauses relating to buildings in the draft Bill—meets with general approval, and if it is adopted by the Town Council, it will then become the duty of the Institute to consider what regulations would most conduce to the public advantage, and to use its influence to protect the owners of property—and therefore necessarily the occupiers of property—from unnecessary and vexatious interference with their rights. In the meantime it seems only necessary, with reference to the clauses of the Police Bill already referred to, to express the opinion that they are in many respects most objectionable, being arbitrary and unjust, and throwing burdens upon dwelling-house property which must result in the great majority of the population being required to pay higher rents than at present. The Council regard this as a very serious consideration, and not at all likely to conduce to improved sanitary conditions, it being perfectly well known that the direct consequence of high rents is overcrowding. It will, however, be unnecessary to criticise these clauses in detail unless the Town Council resolve, in spite of all remonstrances, to go on with the Bill this session. With the view of bringing the opinion of the Institute before the Town Council in a formal manner, your Council submit for the approval of the general body the following resolutions:—1st. That it is expedient that the clauses relating to buildings and the jurisdiction of the Dean of Guild be omitted from the Police Bill. 2nd. That the laws relating to building should be consolidated and amended by a new Act dealing with that special subject, similar generally to the Metropolitan Buildings Act, and applicable to the suburbs as well as to the city of Glasgow. 3rd. That inasmuch as it is impossible for the Town Council or the ratepayers either to consider the advantages of the course now proposed by the Institute or the merits of the draft Bill now published, before the day on which Bills for next session must be lodged, therefore the Institute protests against the Town Council giving notice of their intention to proceed with the Bill at this time. 4th. That a copy of the foregoing resolutions be forwarded to the Town Council.

The Chairman moved the adoption of the report. Mr. James Salmon in seconding the motion expressed an opinion that the Institute should have been consulted by the Town Council in the preparation of the Bill.

Messrs. James Sellars and Campbell Douglas addressed the meeting, and it was unanimously resolved to protest against the Town Council proceeding further with the Bill at present.

### GLOUCESTER CATHEDRAL.

**A** LECTURE was delivered lately in Gloucester by Dr. E. A. Freeman on "Gloucester—its Abbey and Cathedral, and their place in English History." He said it used to be an ancient saying, "As sure as God's in Gloucestershire." That proverb, he believed, had its origin in the great number of religious houses in the county and city, especially in the county at large. But that was not peculiar to Gloucestershire. Gloucestershire was part of a great whole, and they must take Gloucestershire and Worcestershire together, and they would certainly find a collection of great religious houses which there were only two other parts of England that could have any pretensions to rival. One of these was Yorkshire, and the other was the Fen land. The fame of Yorkshire in the matter of monasteries rested mainly on those which had vanished, or were now in ruins—on those beautiful Cistercian houses which had passed away, and which never played any very important part in history. One of these, the Abbey of Selby, was pretty nearly perfect. But somehow people seemed to fancy that an abbey meant a ruin—that every abbey was a ruin, and every ruin an abbey. It was in the Fen land that this Severn land had its real rival. There they had Ely, Peterborough, Lynn, Crowland, Ramsey, and several others—a crowd of great religious houses which would rival or surpass those that lay along this valley of the Severn and Avons; and, on the whole, he doubted whether it would be quite wise to put Gloucester, and Tewkesbury, and Cirencester on a level with Ely and Peterborough. But, on the other hand, they must remember that in that land they had drawn so little from Nature that they had a special necessity to draw upon art.

It was in 1100 that the minster of Gloucester was newly consecrated, which he was inclined to believe contained a very great part of the church now standing. There were at least two churches before this. There was the church of Osric, of which he could tell them nothing except that it contained an altar to St. Petronella; and in 1058 a new church built by Wulfstan, Bishop of Worcester, was consecrated. Did it not strike them as an extraordinary thing that if a church was built and consecrated in 1058, only thirty-one years after the church should need to be rebuilt? Here came in the great question as to the change in architecture which took place in the eleventh century. He would not go over again arguments he had already answered. He thought he could tell them why Abbot Serlo thought it needful to rebuild the church. During the reign of Edward the Confessor there were two styles of architecture and two fashions of church-building going on side by side. There was the old English fashion and the newly-bred Norman fashion, an example of which was set in the Church of Westminster. The Norman prelates often destroyed English churches because they were not large enough, and the fashion came in of building churches on an ornamental scale. This might explain why the smaller church was pulled down and the larger one built. The smaller church was perhaps more like Deerhurst than Westminster, and so Abbot Serlo thought it did not suit the dignity of his house, and he pulled it down. He thought that might be the real explanation. No one had pulled down Westminster, because that was built in the new style. How much of the church was consecrated in 1100? Was it merely the eastern end, or was it the whole of the building, including the eastern and western limb, except that part of the western limb which was manifestly later? There was a good deal to be said about that, but he could hardly enter upon it at length. It was very interesting to compare this church with Tewkesbury. They were both in course of building at the same time, and they had very much in common, and some of the same people had a hand in both. Though the eastern and western limb were in the same style, and there could be no great difference of date between them, they were built according to quite different patterns. They could easily see in the eastern limb of Gloucester, though a network of Perpendicular work was spread over it, what the original might have been—very low piers, and a very great triforium. But going into the nave they would see piers of enormous height, surpassing those of any other English church except Tewkesbury, and a small triforium and clerestory. Going to Tewkesbury, changed as the eastern limb must be, they could see an enormous apse, with the same low piers, while in the nave the pillars were yet higher than at Gloucester, and the triforium smaller. Gloucester was consecrated in 1100, and the monks entered the new minster at Tewkesbury in 1102, and there was a dedication in 1122. The same man as at Gloucester, Robert Fitzhamon, was the second founder of Tewkesbury. He was a great benefactor of Gloucester. He enriched the Abbeys of Gloucester and Tewkesbury with the spoils of the churches in his Welsh conquests and in Glamorgan. The number of Welsh churches which he gave to those two abbeys was amazing. So the Welsh churches passed away. Then wealth came to Gloucester and Tewkesbury; while on the other hand a cell or two rose in Wales, of which the admirable Romanesque church of Ewenny was an example, in exchange for the large amount of wealth taken from them. Was Tewkesbury an exaggeration of Gloucester, or was Gloucester a taming down of Tewkesbury by some one who liked the high piers, but who thought they had gone rather too far when they drove the triforium and



clerestory into nothingness? The dedication of 1122 did not necessarily prove that the Abbey Church of Tewkesbury was quite new then. At the extreme west end of Tewkesbury there was a most remarkable feature, which one would like to place as early as possible. In the west front there were little towers, just as at St. Albans, with the peculiar shafts which were one of the signs of primitive work—one of the features which the new Norman style did not disdain to borrow from the old English style. He should think a feature like that, handed on from earlier times, agreed with 1100 a great deal better than 1122, when the improvements in art brought in by Bishop Roger of Salisbury were beginning to take effect. On the whole there was a great deal to be said on both sides, though the least bit of direct evidence would settle the question either way. Until he got that he was inclined to think that the nave of Gloucester must have been finished by 1100. He could not find any Gloucester history that went minutely into these things. He could find nothing like a rebuilding of the nave. The Chronicle mentions a rebuilding of the great tower in 1222, and a dedication in 1239, the year when so many churches were dedicated, because an order had been put out two years before that all churches which remained undedicated should be dedicated. This showed that the fact of Tewkesbury minster being dedicated in 1122 did not prove it was quite new. The dedication could have nothing to do with the building of the present nave. He suspected it was the changes in 1122 which made the consecration in 1239 needful. Between 1100 and 1222 there was nothing that could be turned to imply anything like a building of the nave. Therefore he was inclined to think it was a perfect church, and not a mere fragment, that was consecrated in 1100. There were parallel cases both ways. Canterbury was built in seven years; so he supposed the minster of Gloucester might have been built in eleven years. Whether they consecrated a fragment or waited until the whole church was finished, depended on whether the new church was something wholly new, or whether it stood on the site of an old one.

### GREEK PAINTING.

THE first of a course of lectures on ancient Greek painting was delivered on the 3rd inst. by Professor C. T. Newton, C.B., at University College. The lecturer began by reminding his audience of the course of lectures on Greek sculpture, from the earliest times to the Roman period, which he completed this year. The main epochs in the history of ancient sculpture had an intimate connection with the general history of the Greeks, with their intellectual, political, and social development. We could not profitably study the history of ancient sculpture except as part of the collateral study of ancient life as a whole, nor could we get a clear idea of the history of ancient sculpture without tracing out, so far as our imperfect knowledge permits, the characteristics and successive stages of ancient painting. Between these twin-sister arts there had been in all times, and especially in Greek antiquity, a close sympathy and a reciprocal influence. The method in dealing with the history of Greek painting in this course would be similar to that adopted in the course on sculpture. The evidence of ancient authors as to the works and characteristics of Greek painters would be first examined, then the extant monuments which illustrate the history of this branch of art would be described. In the case of painting, the extant monuments were few and far between, but we might learn much by the careful study of the mural paintings from the buried Campanian cities, Pompeii, Herculaneum, and those found in the tombs near Rome and Etruria. The paintings on Greek vases would enable us to trace the history of what is called ceramic art from 600 B.C. for nearly five centuries onwards. After noticing the traditions preserved by Pliny and others as to the earliest painters, the lecturer passed on to the period after the Persian war. Polygnotos of Thasos was the earliest Greek painter of celebrity. He flourished 480-460 B.C. At Athens he decorated with paintings the portico called the Stoa Poikile, the Temple of the Dioscuri, the Temple of Theseus, and the Pinakothek on the Akropolis. At Delphi he painted on the walls of the building called Lesche two celebrated pictures, the taking of Troy, and the descent of Ulysses into Hades. All these were mural paintings; the subjects were, partly mythical, partly historical. Thus in the Stoa Poikile were represented the taking of Troy, the battle of Theseus with the Amazons, the battle of Marathon. In the Temple of Theseus came the battle of the Lapiths and Centaurs, and the battle of the Amazons again. In the other two Athenian temples he treated mythological subjects. These great public works were executed during the administration of Kimon, to whom Polygnotos stood in the same relation as Phidias did to Perikles, the successor of Kimon. The paintings in the Stoa Poikile were executed by Polygnotos gratuitously, for which service the Athenians rewarded him with the freedom of their city. His greatest and probably his earliest works were the two pictures in the Lesche at Delphi. Of these there was a very full description in Pausanias. The building called Lesche was thought to have been of elliptical form, with a colonnade on either side, separated by a wall in the middle, and to have been about 90 feet in length. The figures were probably life-size. According to the list given

by Pausanias, there were upwards of seventy in each of the two pictures. In that representing the taking of Troy, Polygnotos had brought together many incidents described in the Cyclic epics. Menelaos, Agamemnon, Ulysses, Nestor, Neoptolemos, Antenor, Helen, Andromache, Cassandra, and many other figures, with which the Homeric poems have made us familiar, all appeared united in one skilful composition, arranged in groups. The other picture, the descent of Ulysses into Hades to interrogate Teiresias, might be called a pictorial epic of Hades. On one side was the entrance, indicated by Charon's boat crossing the Acheron, and the evocation of Teiresias by Ulysses, besides the punishment of Tityos and other wicked men. On the other side were Tantalos and Sisyphos. Between these scenes on the flanks were various groups of heroes and heroines from the Trojan and other legends. From the remarks of ancient critics it might be inferred that the genius of Polygnotos, like that of Giotto, was far in advance of his technical skill. Aristotle called him the most ethical of painters, and recommended the young artist to study his works in preference to those of his contemporary Pauson, who was ignobly realistic, or those of Zeuxis, who had great technical merit, but was deficient in spiritual conception.

The course will comprise four more lectures, as follows:—November 17, "Greek Painters from 460 B.C. to accession of Alexander the Great, 336 B.C.—Apollodoros, Zeuxis, Parrhasios, Pamphilos, Aristides;" November 24, "Greek Painters from Age of Alexander to Augustan Age—Apelles, Protogenes, Theon;" December 1, "Pictures on Greek Fictile Vases;" December 15, "Mural Paintings from Pompeii, Herculaneum, and other ancient sites."

### COVENT GARDEN AND THE CRITERION THEATRES.

AT the meeting of the Metropolitan Board of Works on the 3rd inst. reports were presented from the Building Act Committee on the Criterion Theatre, Piccadilly, and the Royal Italian Opera, Covent Garden. The Committee stated that they had carefully considered the question of the present arrangements for the egress of the public from and the prevention of fire at Covent Garden, and the improvements which it was desirable to effect in the same under the provisions of the Act of 1878, and that they were of opinion that the following alterations of a structural character should be made, in order to remedy existing defects in the building:—That a proper proscenium-wall be built to divide the stage from the auditorium; that such wall be carried down to the level of the foundations, and carried up to the height of 3 feet above the highest part of the roof to which it adjoins; that a wall be built in continuation of the proscenium-wall under the proscenium opening, such wall being carried up to the underside of the stage and carried down to the level of the foundations, and that all openings in this wall, and in the walls dividing the dressing and other rooms, at the side of the stage, from the staircases adjoining, be closed by wrought-iron doors in wrought-iron frames, fitted without woodwork, and hung so as to shut automatically. That the floors of so much of the workshop and store-rooms in the roof of the theatre as extends over the auditorium be formed of fire-resisting materials, or covered with Drake's concrete slabs. That an additional staircase, with the necessary exits, leading directly into the street, be provided from the gallery and the amphitheatre on the south side of the house. That strong handrails be fixed on both sides of all staircases, where not already provided, and that a central double handrail be fixed to the grand staircase. That the doorways between the theatre and the Floral Hall be closed with wrought-iron doors in wrought-iron frames, fitted without woodwork, and hung so as to shut automatically; that the doors throughout the building be made to open outwards; and recommending that a draft notice embodying the above requirements be prepared by the solicitor; that the clerk be instructed to transmit a copy of such notice to the owner, with an intimation that he may submit to the Board any observations thereon; and that the Building Act Committee be authorised to confer, either directly or through their sub-committee, with the owner upon the Board's requisitions, and to report further to the Board on the subject. Recommending that the Board, in exercise of the authority conferred upon them by the 45th section of the Metropolitan Board of Works (Various Powers) Act, 1882, do make the following rules with respect to Covent Garden Theatre, for the safety of the public:—That notices be legibly painted upon the exit doors of the theatre, stating that they may be opened by any one in case of an emergency; that exit doors be secured by bolts only to be shot by a handle to be placed at a height of 3 feet from the floor; that notices be also placed in the various corridors indicating the direction of the several exits; and further recommending that a notice in writing to this effect be prepared by the solicitor, sealed in duplicate, and served upon the owner of the theatre; and that the assistant architect be authorised by the Board, in writing, to survey the theatre from time to time and report whether the rules made by the Board have been observed.

In regard to the Criterion Theatre, the Committee recommended that the Lord Chamberlain be informed that the Board, having regard to the peculiar circumstances surrounding the case



of the Criterion Theatre, in Piccadilly, are of opinion that the theatre is entirely unfit for a place of public entertainment, and that Mr. R. Vigers, in reply to his letter asking that the owners of the Criterion Theatre might have an opportunity of conferring with the Board as to the structural defects of the building, be informed of the decision of the Board upon the foregoing recommendation. The report went on to describe the position of the theatre, that it was not originally intended as such, and that no structural alteration that could be made would afford a sufficient means of egress in the event of a panic or alarm of fire.

Mr. Verity, the architect of the Criterion Theatre, in a letter to the *Times* says:—This theatre was opened in 1874, and at the time of its completion the Board of Works certified that it had been constructed in accordance with the provisions of the Building Act, and to the satisfaction of their district surveyor; indeed, the building could not otherwise have been opened. No alterations in its arrangements have been made since that time. All the staircases and corridors are of fireproof construction, and no question has ever arisen as to the sufficiency of its approaches or exits. So far as I am aware, the only objection ever raised was its position, which necessitated artificial ventilation. This has been so successfully accomplished, that a comparison with other theatres shows that even in this respect it is better than the majority of other houses. As to the usual risks, this theatre is entirely free from them. There are no carpenters' or scene-painters' workshops, all doors open outwards, and every precaution is taken to insure the safety of the public. The fireproof corridors are alone sufficient to contain the whole audience. Up to the present time the proprietors have not had the opportunity of conferring with the Board as to the possibility or desirability of making any alterations. When the matter comes before the arbitrator I have no doubt I shall be able to show that the Board has arrived at a judgment which will not be sustained.

### SANITARY INSTITUTE OF GREAT BRITAIN.

AT the examination held on November 2 and 3 eight candidates presented themselves. The Institute's certificate of competency to discharge the duties of local surveyor was awarded to Mr. C. H. Cooper; and the certificate of competency to discharge the duties of inspectors of nuisances was awarded to Messrs. J. Brown, S. C. Legg, D. Richards, A. Taylor, and J. Watson.

The following questions were set to be answered in writing on the 2nd, and the candidates were examined *vis à voce* on the 3rd.

#### Examination of Surveyors.

##### First Paper.

1. What are the chief Sanitary Acts in force?

- (a) In the Metropolis.
- (b) In other parts of England.

What are their chief provisions?

2. What are the principal provisions of the model bylaws issued by the Local Government Board with reference to—

- (a) Building construction.
- (b) House drainage.
- (c) Ventilation.

3. What is the primary principle to be observed in the drainage of a town or district, and how would you proceed to determine the size and capacity of the outfall sewer?

4. What rules should be adhered to in regard to gradients, man-holes, lampholes, ventilators, and flushing in a sewerage system? Illustrate your answer by sketches.

5. Describe the rules that govern the question of sewage disposal at the outfall.

6. How far is a separate system of sewerage desirable?

7. Describe the essential points to be observed in carrying out a system of house drainage. What are the desiderata of a good form of water-closet? Illustrate your answer by sketches.

##### Second Paper.

1. What are the first considerations in designing and constructing water-works?

2. Describe the conditions to be kept in view in selecting a source of water supply.

3. How much water has been proved by experiment to be used per head in an average household by constant and by intermittent supply? Compare this with the average expenditure of a large town, and explain the cause of the difference, if any.

4. Describe the best means of casting and testing water-pipes, and of making joints.

5. What amount of cubic space per head is required for healthy sleeping-rooms? Why is it necessary to have a certain amount? What limit of height should be allowed to reckon in the calculation?

6. Describe by a sketch the best transverse section of a paved and of a macadamised street, each 40 feet wide. How should macadam be formed and laid?

7. What is the most economical mode of watering and cleansing streets?

#### Examination of Inspectors of Nuisances.

1. What are the provisions of the Public Health Act with regard to cellar dwellings?

2. In inspecting a stream which is complained of as a nuisance, to what points would you direct your attention with the view of making a report?

3. Give the dimensions of a sleeping-room which you would consider suitable for six adults, and state your reasons.

4. Describe some of the simple forms of ventilating valves in general use, and explain their action.

5. In what ways may water become polluted after delivery into houses?

6. What are the objections to brick house-drains? How should house-drains be constructed?

7. What sanitary defects would you look for in inspecting a house where there has been a case of diphtheria?

8. What are the characteristics of various kinds of unsound meat and fish?

### DECORATIVE ART.

MR. J. H. CHAMBERLAIN has mberlain delivered his second lecture upon "Decorative Art, Ornament, and Design," at the Midland Institute, Birmingham.

He commenced by reminding his hearers of the conclusion which he endeavoured to illustrate in his last lecture—that the faculty of admiration lay at the root of all possible power in art and design. He should like to see Wordsworth's words, "We live by admiration," written up over the entrance to every school of art, for however the motto might be fitted to the world in general, it belonged especially to the art student. Their admiration must be based upon the things which they saw; and what was it they saw when they looked around them? There were two great divisions—they were both one in point of fact, but they might be conveniently divided, especially in their endeavour to analyse ancient art, into two—namely, man and nature. With regard to man they must be able to admire him and his ways, or they must drop man out of their art altogether. That, however, would involve their cutting themselves from nine-tenths or perhaps more of the art the world had known. They saw a good deal about man—and man in this case included woman—but did they admire him very much? Every day in their life they saw crowds of people hurrying in the morning to the centre of the town to engage in their business pursuits, but he did not suppose they took much notice of them, except that they appeared in a hurry and seemed glad it was a fine morning. "Oh," someone would reply, "that's everyday life: who cares for everyday life?" Well, the absolute truth about art was that it had been made up of the doings of everyday life, and if they could not get an interest in the ordinary business and occupations of the hour—the ordinary work by which they must all get a living—they were deprived of one of the principal elements that in past times had gone to compose living art. Perhaps if they could not take an interest in man's work they might in his amusements, or in collective acts and movements with his fellow-men. If they could not take a deep interest in man in some or other of his aspects, there was a great gulf between them and the past, for they would find that in all past ages people did make practical art out of all these things. Next they came to the division of Nature, by which they meant beauty in the natural world, and about which in the present day they prided themselves a good deal. They said that their eyes had been opened, and that they admired a great many things to which people a century ago were dead. They were fond of excursions into the country and beautiful scenery, and the frequency of their visits to see beautiful things might perhaps be taken as a gratifying proof that they cared more about the beauties of Nature than their forefathers three hundred years ago. But if he went into a Wesleyan chapel, or almost any building men put up, he did not find in their work any evidence of this greater fondness for Nature. Possibly it was because their ideal of Nature clashed with their ideal of getting rich. They did not find that a railway company had any hesitation in destroying any beautiful thing in Nature if they thought it was to their profit, and he verily believed that if Paradise itself were "to let" to-morrow, and a company could be persuaded they could make 20 per cent. out of it, they would cover it with cheap buildings, and be glad that they had done so. Putting this practical side against the assertion of their greater love of Nature, he thought it was a difficult matter to settle. What he now proposed to do was to take them a journey along the path of admiration the past nations had travelled in, and to see what it was by the wayside that they admired and founded their art upon. They would find that with some nations form was everything, with others colour; some saw more of sadness in the universe perhaps than any other quality; others, on the contrary, more of joy and cause for laughter. There were three headings under which the art of past times might be divided—namely, that in which interest in and admiration for man formed the base, that in which Nature only formed the base, and that in which both were mixed. Going back to barbaric times, the lecturer proceeded to point out and to illustrate by drawings that probably the earliest form of decoration that



suggested itself to the human mind arose from the simple weaving of grass, upon the diaper pattern of which many important decorative forms, such as the zigzag and the Greek fret, were built. The twisting of a rope would give the spiral ornament. Barbaric art, however, soon took higher flights, and the growth of tribal feeling led to efforts to portray and leave a permanent record of the victories of the tribe over its enemies. What had we been doing during the last few weeks in the illustrated papers but the same kind of thing, though in some cases not so artistically. Barbaric art was thus based, first, upon admiration of the manufactures of man, and next upon the deeds man had done. The lecturer went on to point out that in the next stage, the civilisation of Egypt, the profuse pictorial art of the Egyptians was largely based upon admiration of warlike achievements, but that the portrayal of these deeds of cruelty was tempered by evidences of the Egyptian admiration and love of Nature in the introduction of representations of the great sacred river, and the marvellous forms of beauty that grew on its reedy banks. Views were thrown upon the screen, showing the embodiment of a love of natural forms in the architectural decoration of the Egyptian temples. Mr. Chamberlain then passed on to Greek art, of which he took as an illustration the architecture and sculptures of the Parthenon at Athens, one of the most marvellous works the world had ever known. He graphically described its beautiful decoration, and showed that it had for its theme, man perfect in physical beauty, and rising almost—perhaps quite in the Greek mind—to the level of a God. Those sculptures were not done by contract or by competition; there were none of your nasty methods in Greek art; but the artists had the marble given to them, the time given to them, the best men were got to do the work, and they did that which God sent them specially into this world to do. He also pointed out how the mural tablets of the pan-Athenaic procession showed an admiration of man in his social life, that the work was not merely ideal art except in its method, but good thorough portraiture of the people of Athens at the time it was executed. He promised in his next lecture to draw the parallel between the place which humanity occupied in the Greek temple and the place it occupied in the Mediaeval cathedral. They would see humanity there no longer glad, triumphant, and rejoicing, but humanity crowned with sorrow and suffering, but with new developments and new powers; and he thought he should be able to persuade them that the Middle Ages carried their art in its fulness to a greater height of excellence and greater beauty than even was done by the Greeks.

### BIRMINGHAM MASTER BUILDERS' ASSOCIATION.

THE annual meeting of the members of the Birmingham Master Builders' Association was held on Monday at the Great Western Hotel. Mr. C. W. Barker presided. The report, which was taken as read, stated that in consequence of the continued quietness in trade there had been no dispute with the operatives in any branch. The demand for labour had been very limited and supply abundant, as it had been generally throughout the country. The committee were surprised at receiving demands from the carpenters, bricklayers, plasterers, and labourers for an increase of wages, together with notice for alterations in various working rules. Whilst the committee characterised the agitation as being most unwarrantable in the present depressed state of the trade, they wished the members of the association to know that, although there were various matters which in their opinion required readjustment in the interests of the employers, yet, for the sake of peace, they refrained from giving any notices; but, under the circumstances, the whole questions would be submitted to the new committee, who would bring them before a general meeting of the trade. The carpenters demanded an advance of  $\frac{1}{4}d.$  per hour, the bricklayers  $\frac{1}{2}d.$ , the plasterers  $\frac{3}{4}d.$ , and the labourers  $\frac{1}{2}d.$  At the present time there were no working rules with the bricklayers, but they submitted a code for consideration. The Water Committee of the Corporation of Birmingham having proposed a scheme for the insurance of water-fittings and for licensing plumbers, the committee and the Plumbers' Association felt that it would interfere with their rights and interests, and thereupon took active steps to offer the most strenuous opposition. A memorial was drawn up, signed very numerous by the members of the association, and a copy sent to every member of the Town Council, praying for the rejection of the scheme. A sub-committee likewise had several interviews with a gentleman who undertook to present the memorial to the Council, and to whom the strong objections urged against the scheme were forcibly explained. The result of the discussion in the Council, however, was that the scheme was adopted as an experiment for two years. The committee regretted that the opposition they made was not more successful. The insurance company promoted by the National Association had been able to reduce their premiums by 25 per cent., thus bringing the rate to a little under three-fifths of a penny for each  $1l.$  paid in wages, and the directors confidently recommended that rate to the trade, especially as the company was of a mutual nature, each insurer getting thereby the same

benefit. There had been no meeting of the Standing Committee or Conciliation Board during the year, as no dispute had been brought forward. The balance-sheet showed the total receipts for the year to be 122*l.* 3*s.* 4*d.*, which, added to last year's balance of 106*l.* 2*s.* 3*d.*, made a total of 228*l.* 5*s.* 7*d.* The expenditure amounted to 118*l.* 19*s.* 11*d.*, leaving a balance in hand of 109*l.* 5*s.* 8*d.* The number of members of the association was seventy.

The Chairman moved the adoption of the report, which he considered was a fairly satisfactory one. Mr. J. Webbe seconded the motion, and it was carried unanimously.

Mr. T. Barnsley was elected president of the association for the ensuing year. The other officers and committee were appointed, and a resolution was passed referring the notices which had been received from the operatives for an increased rate of wages to the new committee.

### GENERAL.

**Mr. John O'Connor** is painting scenery for the "Ajax" of Sophocles, which will be performed in St. Andrew's Hall, Cambridge, on November 29 and 30, December 1 and 2, by undergraduates of the University. Great care has been taken to ensure accuracy in the costumes, armour, and other accessories.

**Mr. Cornelius Walford** has just completed a new work on "Ancient and Modern Fairs." It will be published shortly by Mr. Elliot Stock in the first series of the "Antiquary's Library."

**The Duke of Teck** will preside at the opening of the Hornsey School of Art on the 15th inst.

**Mr. W. B. Richmond** has resigned the Slade Professorship of Art in the University of Oxford.

**Mr. W. L. Christie** has presented a new mace to the Corporation of Lewes. It was designed by Mr. Birch, and was made by Messrs. Hancock. The cost has been nearly 600*l.*

**Mr. T. Morgan, F.S.A.**, will read a paper on "The Mural Tablet in St. Olave's, Hart Street," at the meeting of the London and Middlesex Archæological Society on Monday next. A paper will also be read by Mr. Rye on "The Pipe Roll for London and Middlesex."

**Rudolph Hoffmann**, the historical painter, died lately at Darmstadt. He was one of the artists of the Wartburg frescoes.

**Mr. G. H. Birch** will deliver a course of three lectures at the Society of Arts in April next on "The Decorative Treatment of Metal in Architecture."

**Mr. A. W. Blomfield** has been appointed cathedral architect for Salisbury.

**Mr. Edward Webb, A.R.I.B.A.**, of Exeter and Barnstaple, has prepared plans for a new hotel proposed to be erected at Morthoe, about five miles from Ilfracombe.

**The Lectures at the London Institution** for the session will commence on December 4. Among them will be the following:—"Crystallography," by Mr. Ruskin; "Modern Pictorial Art," by Mr. H. Blackburn; "The Proper Use of Modern Classical Architecture," by Professor Kerr; "Æsthetics of Nature," by Mr. A. Tylor; and "The Great Masters of Etching," by Mr. Seymour Haden.

**A Contract** for rebuilding the first house in the square of Ibrahim Pasha, Alexandria, has been signed with the Travaux Publics Company. The work of restoration is to be finished at the end of next year.

**The Hamilton Collection of Manuscripts**, which have been acquired by the Prussian Government, mainly through the personal influence of the Crown Prince and Crown Princess, will be paid for out of the fund placed at the disposal of the Emperor for expenditure by him at will on the advice of this or that Minister.

**Royal Scottish Academy.**—The annual meeting of the Royal Scottish Academy was held in Edinburgh on Wednesday, when Mr. Robert MacGregor, Mr. David Farquharson, and Mr. J. H. Lorimer were elected Associates.

**A Dissolution of Partnership** has taken place between Messrs. J. Bromilow and H. A. Cheers, architects, of Liverpool.

**The Goole School Board** have approved of plans by Mr. Watson, of Wakefield, for the extension of Alexandra Street Schools.

**St. Mary's Church, Monmouth**, has been reopened, after restoration, at a cost of over 7,000*l.*, from designs by the late Mr. Street, R.A. The church was founded in the year 1069.

**An Exhibition of Architectural Drawings** is to be opened on the 16th prox. in Edinburgh, in the rooms of the Royal Scottish Academy. It will comprise an historical collection of drawings, and is being promoted by the Edinburgh Architectural Association.



# The Architect.

## A MODEL GUILD.



AMONGST the multitude of learned societies, colleges, professional associations, and other such confederacies for the advancement of knowledge, with which we are in these days environed, it will be difficult, we venture to think, to point to one which does better duty, or does any kind of duty in better form for practical benefit, than the Guild of Junior Architects—in other words, the Architectural Association so called—whose “Brown Book” for the new session has just come into our hands. It is known to everybody connected with English architecture that “the Association” holds a position of great influence with the younger men; and it is known also that this position is kept up by persistent hard work of one sort or another; but it seems to us by no means likely to be so generally understood as it ought to be how great the amount of work really and substantially is which this most successful organisation is doing from year to year, indeed from week to week, for the education of the young men of the profession.

There is a little controversy upon the point whether the Architectural Association ought to be considered as having been established in 1847, when the name at least was newly taken, or in 1842, when a few of those who then became principal members had established a Society of Architectural Draughtsmen, which merged in it; but one thing is certain, that neither at the one date nor at the other could the wildest imagination have been privileged to foresee that in 1882 the little fellowship of youths not only would still be in existence, but would command a list of nearly nine hundred members, a revenue of nearly a thousand a year, a lending library of 1,200 volumes, an organisation spread all over the country, prizes and honours of its own in plenty, even a travelling studentship amongst the rest, festivities and amusements of its own by way of a little relief, and a scheme of educational classes scarcely surpassed, if surpassed at all, so far as a single specialty can go, in any school or college in the land. We may well claim to be excused, therefore, if we request attention more particularly than usual to a statement of what is being done in this institution.

The Architectural Association, let us premise, does not begin by “keeping up appearances” in respect of a stately and empty house. It disburses 75% a year for little else than the use of a meeting-room on Wednesdays and Fridays; 16% for heating, lighting, and cleaning; 22s. 6d. for insurance; and nothing at all for the item of “salaries and wages,” so important in many other societies in which the performance of work is of less interest to the officials than the receipt of remuneration. But then it provides and pays for a public conversazione in state; a soirée, private and confidential, and brimful of amusement to the members; a register of employment; a round grant to the library; and a goodly list of prizes. It will not surprise the intelligent reader to be further told that, as one practical outcome of all this, it secures for its members the best of the rewards which are bestowed by the Royal Institute of Architects and the Royal Academy itself.

The most prominent feature in the year's work is, of course, the series of ordinary or public meetings at which papers are read and discussed. There are thirteen of these laid out for the session now begun; and of the subjects which are to be considered, and the lecturers who are to discourse upon them, we may give half-a-dozen examples, thus:—“Sundry Working Drawings,” by Mr. SEDDON; “Vaulting,” by Mr. WOOD; “The Ornament of the Period,” by Mr. DAY; “Modern Design,” by Mr. SEDDING; “Theatres,” by Mr. EMDEN; and “Italy,” by Mr. BAGGALLAY. Although the Architectural Association makes no pretension to go beyond the range of what we have called a Guild of Juniors, we must observe that the dissertations which are thus delivered, and the discussions which follow them, are found fully worthy of being reported *in extenso* by the press, and are attended by large meetings.

A “Class of Design” comes next. Eight meetings of this sub-section were held last year, with an average attendance of

16 members, producing 12 designs or more for inspection at each sitting, and dealing with subjects of building of such a class as a chapel, a small hospital, an inn, and so on. Subordinate to this, for the younger members, there is an “Elementary Class of Design,” attended on an average by 26, producing 18 designs at each sitting, the subjects being adapted to the order of less-advanced students. But there is also in connection with these excellent classes a course of nine lectures treating of historical style *secundum artem*. Mr. TARVER is the professor here, and he takes his hearers, from 25 to 50 in number, through the whole of the marvellous narrative—one of the most marvellous in all the philosophy of human work—from the Greek and its predecessors to the Modern Italian and its successors. The students pay 7s. 6d. for this, and half-a-crown optionally for lithographs of the diagrams; and it is to be hoped his scholars repay the lecturer in cordial thanks much more than in money.

Colour Decoration is a subject which is separately treated in another class, holding 10 meetings, and doing good work, although with no very large numbers as yet.

The class of Construction and Practice is a more important one; the attendance averaging 36, and 118 papers being produced by them during the session. An advanced class in this division is attended by from 6 to 12, and the subjects treated of belong to the highest order of constructive skill. There are 8 papers read. Then there is a special course of lectures in connection with these classes also, under the charge of Mr. BLASHILL; there being 8 evenings at his disposal, and the whole range of building construction being gone over. A few shillings pay for the privilege of attending here as before, and there are from 25 to 60 pupils.

A new class for the study of Planning and Specification-writing holds 6 meetings, about 9 members being present, delivering 9 sets of papers at each meeting; a particularly useful class, if the others were not all particularly useful.

Land Surveying forms the subject of yet another class, there being 6 lectures indoors and 6 field meetings on Saturday afternoons. It had 8 students last year.

The usefulness of the circulating library may be indicated in half a dozen words, by stating that there are 35 evening attendances for the exchange of books, and that from 20 to 90 books are so exchanged on every occasion.

The annual excursion of the Association is so well known and so much appreciated that it has become one of the chief events of the professional year. In August 1882 the thirteenth excursion in Norfolk was attended by nearly 40 architects, young and old.

The Sketch Book of the Association has long been a production beyond all praise. Twelve monthly parts are published annually, each containing 6 plates “contributed and lithographed by members”; and a subscription of one guinea from members and one and a half guineas from strangers pays for the volume.

We ought not to omit to mention that prizes are given in all the classes, and in connection with the Sketch Book also.

The Travelling Studentship, recently instituted, is not yet able to compete in value with those of the Royal Academy and the Institute; but it has a certain advantage over both of those, in so far that the recipient is enabled to feel that his honours and reward come from his own fellow-students, and indicate the approbation of the young rather than the old, and perhaps the bright rather than the dull.

The “Brown Book” closes its catalogue of studies by referring the members to the Royal Academy Schools, the lectures at King's College and University College, London, an “Artists' Society for General Study from the Life,” the Royal Architectural Museum and School of Art, the National Art Training School at South Kensington, and “the Artists' Rifle Volunteer Corps”—last not least as a bond of brotherhood and manly virtue.

Have we not redeemed our promise to describe a Model Guild? Speaking very soberly indeed, we know of no professional society to compare with it; and it would be difficult to over-estimate the effect which it must be producing upon the practical architectural world of London. Not only do many individual architects already owe to its agency their success in life, but upon the whole profession throughout England its quiet influence cannot but be powerful for good, and the honour in which it is held by the senior body, the Institute, and by other artistic and scientific societies, affords further proof, if it were needed, of work exceedingly well done. May it long prosper!



## ILLUSTRATIONS OF VENICE.

THE interesting little exhibition now opened at the Fine Art Society's smaller room, under the plea of illustrating Venice and things Venetian by the hands of living artists, has been really organised for the sake of bringing forward the work of the late JAMES BUNNEY, who two months ago was also among the "living." The large study of the façade of San Marco, which for six years had been growing under the hands of this patient artist, takes the central place; while smaller oil studies and drawings of the church and of details about the exterior of the Ducal Palace and a large number of sketches in opaque on tinted paper, form together the main part of the collection. We will first glance at the outlying contributions. Here are a number of CLARA MONTALBA'S clever Venetian sketches (17-34), in the three aspects under which the city of the sea seems to appeal to her—luminous with golden mist; cold, pale, and pearly; and gloomy with contrasts of chill grey water and swarthy red sails and black keels—such as she paints in like harmonies about the Thames wharfs and bridges in London. Here are a drawing of blue moonlight and a careful little study of a narrow canal by Mr. POYNTER, R.A. (36, 37); and poor examples of what Mr. D'EGVILLE and Mr. E. GOODALL have done, besides several other unimportant pictures. Mr. ARTHUR SEVERN, who is ambitious rather than successful, partly from certain unhappy mannerisms and a failing perception of colour, has an opportunity here of showing no less than fourteen pictures in oil and water, which all have a certain intelligent grasp of the subject, and are broadly treated, but yet fail somehow to impress. The scene in which a hailstorm is driving down in fierce slants upon the Riva degli Schiavoni and the sullen water, where the boats lie close huddled in-shore for shelter (95), is one of the most striking things the artist has done. Several pencil sketches and drawings by Mr. RUSKIN (90-94) are extremely interesting, and show how, with a rather uncertain hand, he yet seizes on significant lines and details, emphasising what to him are the important facts in a view, or maybe a house-front, or vista of houses and water, seeing and noting tenderly the subtle curves of ogee arch, the half-effaced sculpture, or wall scarred by time. One little oil-picture of an *External Window and Staircase in the Contarini Palace* (45), by HENRY DARVALL, with a single figure descending the steps, has the poetic selection and treatment of subject which mark the few pictures by Mr. DARVALL that find their way into London exhibitions. *The First Dip* (16) is the title of a careful oil figure-subject by VAN HAANEN, which has none of the "busyness" and motley restlessness of colour that have often marred his clever work. This is a group of women and boys gathered at the canal entry of a house to superintend the first bath in the waterway of a little fellow of six or eight, whose tender flesh and sunny hair contrast with the swarthy skin of the lad who holds him, and the thick rich gowns of the girls. The figures are grouped in a skilful serpentine line; the colour is brilliant, yet kept well in harmony; and the whole, solidly painted and strong, is one of the pleasantest, and at the same time most forcible, things we have seen by VAN HAANEN. His follower, Mr. WOODS, A.R.A., has sent a good study of a *Country Priest*, and a group of figures about *The Foot of the Giant Staircase*, in which the chief actor is a smartly-attired Venetian lady, with the traditional veil and fan and modern furbelows. The picture is very well painted and put together, and yet strikes a false note in taste. Some nine oil pictures are sent by DAVID LAW, whose work with the etching-point is familiar and admirable. Most of these views strike us as rather poorly composed and wanting concentration; the technique is a little thready, and the colour tends to the crude; yet there is atmosphere in these pictures and decided power in the management of various detail. One of the best is *The Fish-market*, where the houses are so well set back behind the picturesque sheds of the fish-vendors at the water's edge, and the laden craft are pushing to and fro with their wares. Yet one more painter's work, and we turn to Mr. BUNNEY. The name of A. N. ROUSOFF stands against fifteen drawings of Venetian interiors, street views, lagoons, &c., in which the characteristic figures introduced are as deftly drawn as the surroundings are effectively portrayed. There is a suspicion of "picture making" about these drawings, and yet they are undoubtedly attractive—painted with pure, forcible colour, in a brilliant key, and with a clean, broad brush; drawn and composed with facile cleverness, and by no means devoid of genuine feeling. Alto-

gether this Russian painter has the higher kind of qualities which ensure popularity.

Thoroughly to criticise the St. Mark's façade as recorded by Mr. BUNNEY would require many pages instead of one, because it would entail historic investigation, comparison of engravings and photographs, and so on. At the same time, to criticise this canvas as a picture by ordinary rules would also be a mistake, because in the full acceptance this is not a picture, but a painted record, and to a certain extent it was thus intended by Mr. BUNNEY himself. He wished to set down, not any striking pictorial effect or special aspect of the wondrous façade which has not its rival in the world, but rather such portraiture of it, under the most revealing light of morning, as should show all the colours, the materials, the sculpture, the uncertain levels and perpendiculars, the massing of various forms and strange lines which "unrestored" St. Mark's presented; in such portraiture handing down a loving chronicle of what has been of glory even within our own century. To start with, portraiture of a building does not make a picture; and, besides that, an artist painting with the intention of Mr. BUNNEY, as a recording angel, unconsciously paints not only what he sees, but what he knows. This is not, therefore, nor are the other studies of St. Mark's, exactly what any person would see, nor how the objects at one given distance could be seen. Hence spring chiefly the artistic shortcomings of Mr. BUNNEY'S pictures; he doats upon the lovely marbles, the quaint sculptures, the golden and many-coloured mosaics, until he is apt to ignore not only the wear and tear of time, but sometimes also the relative truth of bulk, form, and space in the larger masses. The restorer has not been at work on the architecture of Mr. BUNNEY'S façade, but the *cleaner* decidedly has, and not on the façade alone; and many a pillar has been scrubbed and polished to make the veining show up, until, to speak lightly, it is ground flat. A technical reason for this flatness of effect, besides the exaggeration of surface quality, is the thin painting or stain-like quality of the artist's brushwork. These are all faults of manner: it is easy to find many merits. No praise can be too high for the laborious pains and careful drawing of all the finished pictures; and more than that, the colour is often exceedingly beautiful, and harmonises a range of rich and varied hues with an uncommon perception of relative tone. It is astonishing that the artist should have brought his pictures into such unity of effect, as his habit was to finish them piecemeal, a bit at a time; and as he worked always from nature and literally, and also slowly, this sweetness and harmony of colour shows a very vivid sense as a colourist.

We must be allowed, under all due sympathy with the anti-restoration societies, to say that Mr. BUNNEY'S portrait of the façade to some extent adds an argument for repair from an engineering point of view, so palpably unsafe are the levels. On the other hand, at the right corner the grey tone of the restoration makes itself felt, and there can be little doubt that the delicious and glorious colour of the façade will vanish under the process of renovation.

The most satisfactory of the smaller oil studies are perhaps *The North-west Door in the Porch of St. Mark's*, lent by Mr. RUSKIN; *The Horses of St. Mark's*, lent by Mr. GEORGE HOWARD, M.P.; the studies of the *Judgment Angle of the Ducal Palace*, lent by Mr. GEO. SMITH and H.R.H. the Duke of ALBANY; and the *North-west Angle of St. Mark's, with the Piazzetta del Leone*, lent by Mr. S. BEAUMONT. Also particularly good is Lady SYKES' picture, *Under the Broglio of the Ducal Palace*. Two very fine interiors of St. Mark's, of considerable scale, were added after the issue of the catalogue: both are impressive, even grand, in effect and colour.

The collection of sketches in opaque show the artist's delight in colour and capacity for making charming pictorial notes. It is melancholy to remember that the skilful and loving hand has ceased from its labour. In the sympathetic memoir written by Mr. WEDDERBURN for the catalogue, there is a sentence which gives the character of the man in his single-hearted devotedness. After six hundred mornings given to the large picture of St. Mark's façade, "when it was finished, and he thought that some people at least must care that St. Mark's should have been so faithfully reproduced, he said, in his quiet way, that he liked to think that on not one of those many mornings had he felt his heart sicken or his hand weary of the work, but had, on each of them, started to it with equal energy and fresh delight."



## WALTHAM ABBEY.\*

By J. ARTHUR REEVE.

A BOOK on Waltham Abbey by Mr. BUCKLER, bearing no date, but seeming to have been brought out during the last twelve months, has lately been placed in my hands. It has a taking exterior: it is well bound and well printed, is embellished with various initial letters and final devices, and possesses, moreover, six plates of considerable size, containing twenty-two separate sketches and diagrams illustrating the architectural and other remains connected with the Abbey.

On becoming better acquainted with its contents, however, one does not find that the fair promise of the book is maintained; it bears evidence of considerable want of care and thought in the compilation of the letterpress, and the drawings are faulty both in perspective and proportion; they also show so much want of precision in the indication of detail where detail is of great importance, that from an architectural or archaeological point of view they may be said to be useless.

It may perhaps be recollected by those interested in Waltham Abbey that in the months of January and February 1876 some half-inch scale drawings of mine of this very magnificent building were published in *The Architect*, together with some rough notes made on the spot, in which I called attention to the differences which exist between the eastern and western portions of the existing nave. Both the drawings and the notes were made at the suggestion of the late Mr. W. BURGESS, under whom I was at the time acting as clerk of the works to the so-called Lady Chapel, which was partially restored during the summer of 1875 by him. The drawings were undertaken, as stated in the notes above named, for the purpose of throwing some light, if possible, on the vexed question of the dates of the building as we now see it; and as I went on I was astonished to find how much genuine evidence was obtainable.

I began my work with a fairly unbiassed mind, not having at that time gone into the arguments on either side; but after a very few days' work I became entirely convinced that on one hypothesis alone can the existing state of the building be explained, and nothing which has since come to my knowledge has caused me to alter the opinion then formed—viz., that part of HAROLD's church is still in existence.

It is, perhaps, unnecessary to remind those who are acquainted with the Abbey that the question at issue for years past has been as to whether there is any portion of HAROLD's church still standing, and whether the two easternmost bays on each side of the nave are earlier or later than the remainder—Mr. E. A. FREEMAN maintaining that they are later, and Mr. J. H. PARKER, that they are earlier. With these authorities respectively at the head of the rival factions, it can hardly be thought presumptuous on the part of a fresh student of the subject to attempt to strengthen the arguments on either side. I will, therefore, not apologise for again opening the question, but will proceed at once to criticise those portions of Mr. BUCKLER's statements and deductions which my knowledge of the building leads me to call in question.

Mr. BUCKLER divides his work into three parts—(1) historical notes, (2) architectural notices, and (3) description of the plates. In the first section there is little which demands notice. We all know the legend which is contained in the old MS. "De Inventione Sæ. Crucis," and the facts connected with the foundation and execution of the splendid church built by Earl GODWIN (or, as Mr. BUCKLER calls him, "Earl HAROLD") when by some means he became possessed of Waltham Abbey and its sacred relic. It is also well known that King HENRY II. altered the foundation from a community of secular canons to one of regulars, and also that during the thirteenth century some contention arose between the monks and the townspeople as to their respective rights in the church, which seems to have resulted in the separation of the nave from the choir and transepts by means of a wall built across the western arch of the central tower.

Perhaps the most interesting part of these "Historical Notes" is that which relates to the question raised by the statement of MATTHEW PARIS to the effect that the consecration of Waltham Abbey took place in 1242. This part of the controversy, however, we will not go into further than to say that some such explanation of the difficulty as that suggested

by Mr. BUCKLER seems fairly satisfactory. It is clear that no thirteenth-century consecration can have immediately succeeded the erection of any of the existing building, and, therefore it does not in any way affect the question of dates, which after all is the most important point to be settled in connection with Waltham Abbey.

I will now pass on to the second division of Mr. BUCKLER's work, in which there is much more to criticise than in the foregoing; in fact it seems to me that hardly any of his statements and arguments will bear the test of a careful investigation on the spot.

In order to show that the author has not given as much serious study to the building as anyone desirous of writing about it should do, it is only necessary to point out that he makes no allusion whatever to the fact that the clerestory on the north side of the nave in the five western bays is clearly of a later date than any of the other Norman work in the whole building. It was probably put in by HENRY II., when he made the alteration in the institution above alluded to, which seems to have been completed in the year 1177. The design of this late work is, it is true, very similar to that of the earlier portions of the clerestory, but the differences are very marked, and in all probability would have been more so had HENRY II. not been desirous of making his alterations to the nave harmonise as much as possible with the more ancient parts of this end of the church.

Another curious error which Mr. BUCKLER falls into is to be noted in the suggestion which occurs on pages 32 and 33 of his book, that it was the intention of the original designers of Waltham Abbey to vault the nave in stone, in which assumed fact he perceives "another difficulty in the way of our belief that this church is of his (HAROLD's) time." But had Mr. BUCKLER gone a little more carefully into the matter, he would have found that this difficulty is entirely dissipated by the real facts of the case; HAROLD clearly had no more intention of vaulting his nave than any of his Norman contemporaries or immediate successors ever had. The pseudo-vaulting shafts at Waltham, as at Peterborough, are carried right up past the clerestory windows to the springing of the roof, where they terminated in capitals, and no doubt supported the ends of tie-beams. The neckings of one or two of these capitals still show below the flat ceiling, but in most cases they are hidden by it. Surely Mr. BUCKLER must be aware that vaulting, at all events to a large nave, springs either from the level of the string below the clerestory, or from the springing of the clerestory itself—never from a point some 3 feet 6 inches above the top of the clerestory arches.

On pages 22 and 23 Mr. BUCKLER proceeds to compare the type of work found at Waltham Abbey with that which exists in other early Norman buildings in England. He says: "Here (i.e. at Waltham) we find neatly-cut stonework; mouldings are ably executed;" and "The work affords evidence of the use of the chisel rather than of the pick. The plan, too, is that of a fully-developed Norman church of the largest class, showing in all its parts traces of the experience which practice alone could give."

"These evidences would be amply sufficient to prove that the work is well advanced and not early Norman."

In answer to this I say that in my opinion the early work throughout the western portion of the church bears distinct evidence of having been done with a pick and not with a chisel, but it has been done with extreme care, which proves that first-rate workmen must have been employed.

As to the fact, moreover, that the plan is that of a fully-developed Norman church, I see no reason whatever why such should not have been adopted by HAROLD. As Mr. BURGESS said in 1860, in a pamphlet published on Waltham Abbey in that year, "The richness of a building is no certain criterion of date;" and again, "To sum up, although it can scarcely be denied that the architecture of the nave of Waltham more resembles the work of the time of HENRY I. than that of the very few remains of buildings contemporary with HAROLD, still it is quite within the range of possibility that HAROLD might have built it, and there is no distinct proof to the contrary."

From the ancient documents relating to HAROLD's church we know that the building was looked upon in its day as one of extraordinary magnificence, that it was built of stone, that its roof was covered with lead, and that in parts the church was decorated with gilding and bronze plates. History also tells us that Earl GODWIN, having once been wrecked on the coast or Normandy, was taken to the Norman court, and remained

\* "The Abbey of Waltham Holy Cross: Historical and Architectural Notes." By Edward H. Buckler. London: Elliot Stock.



there for some time; while it is well known that intimate relations and much intercourse existed between the court of the English king, EDWARD the Confessor; and that of his Norman contemporary and successor, WILLIAM the Bastard. It seems most natural to assume, therefore, that highly-cultivated men, such as HAROLD and EDWARD undoubtedly were, must have been much impressed by the great grandeur of the buildings which were to be found at this period in the northern part of France, and that when they determined respectively to found abbeys at Waltham and Westminster they would derive not only their inspiration from Normandy, but probably even their materials and workmen as well.

It appears to me, therefore, by no means surprising that HAROLD, beginning to build in 1056, should have employed very much the same style of architecture as that which ten years later became the architecture of the country, having been introduced by the very men with whom he must have associated whilst he was perhaps a somewhat unwilling guest at the Norman Court.

So much for the indirect evidence suggesting the probability that a portion of the existing church may be of HAROLD's design. We will now proceed to a closer investigation of the direct evidence which may be derived from the building itself.

Many eminent archæologists, such as Professor WILLIS and Mr. J. H. PARKER, have attempted to establish the theory—originated, I believe, by Professor WILLIS—that it is possible to apply an almost infallible test to Norman buildings in order to decide whether they belong to an early or a late period. They would have us believe that all the earliest examples are executed with very wide or moderately wide joints, and that fine jointed work is never found until about the middle of the twelfth century.

There is, unquestionably, much truth in this theory; it is supported by numerous examples of existing Norman buildings, and seems naturally to commend itself to one's understanding; but that it cannot universally be applied is admitted by Mr. BUCKLER by a reference to Canterbury Cathedral in the very paragraph in which he quotes the theory in support of Mr. PARKER's argument, that it proves the sequence of dates at Waltham Abbey. Under these circumstances it hardly seems so conclusive as might be desired; nevertheless, Mr. BUCKLER is content to accept it as proof that the wide-jointed work at the eastern extremity of the building is earlier than the rest of the church, and having assumed that as settled, he founds a further theory upon it to account for the present condition of the building.

There are certain mouldings in the wide-jointed work at the east end of the south aisle which everyone must acknowledge clearly fix the date of that portion of the church at about 1120; therefore, following out the theory of jointing above noticed, Mr. BUCKLER naturally concludes that the whole of the fine-jointed work to the west of the second pier from the east end—namely, five bays on each side of the nave—belong to a later date than the first quarter of the twelfth century.

People who have adopted this view have, however, always seen that it is difficult to account for the total destruction of HAROLD's nave only about sixty or seventy years after its erection, and in order to avoid this difficulty Mr. BUCKLER somewhat ingeniously argues that HAROLD's church never was finished, that in all probability the presbytery alone was completed to begin with, and that the early Norman kings went on with the building gradually from east to west until it was finished somewhere about the middle of the twelfth century.

If this be the correct view of the case, then the change of date which unquestionably takes place at the second pier from the east end on both sides merely represents a period of a few years in the earlier half of the twelfth century, when for some reason the work of completion came to a standstill; and no doubt this supposition is quite tenable, provided no conflicting evidence exists.

But does a really searching and unbiassed investigation of the building support this theory? It is necessary in any such research as this to enter upon the question without any preconceived ideas, such as, for instance, the comparative antiquity of wide and fine jointing, or, within certain limits, the particular type of masonry employed. These arguments can only be admitted as of weight when no clearer proofs are forthcoming, but in the present instance I think I shall be able to show not only that very clear evidence of the sequence of dates does exist in the building itself, but that it is entirely in opposition to the above theory.

In the first place, if we compare the architecture of the eastern and western portions of the church, we find that the former, although more rudely executed, is clearly later than the latter. This becomes apparent in several ways, but especially on account of the fully-developed running arch mouldings already alluded to as occurring at the east end of the south aisle; these distinctly belong to the wide-jointed work, as stated above.

Now, throughout the Norman work of the western portion of the church, there is no attempt at a running moulding, with the exception of a very shallow bead on the edge of the lower rim of the triforium and clerestory arches—a moulding which might evidently have been done with an implement of the nature of a light axe.

If, therefore, we assume that the western work is later than the eastern, we have to believe that the Normans in the second quarter of the twelfth century abandoned a development of mouldings which had obtained at the latter end of the first quarter of the same century, and which may be said to have become universal in the third quarter. It is unnecessary to enlarge upon the improbabilities of this theory; indeed, these facts alone, which are incontrovertible, are almost sufficient to prove that the eastern part of the church is the later. But as pointed out in my former notes on Waltham Abbey, already referred to, the most important evidence of all is to be deduced from the subsidence which took place at some period in the second pier from the east end on the south side of the nave, which Mr. BUCKLER only mentions in a very casual manner.

Anybody who will take the trouble to visit the church and study the effect of this settlement will find that all the arches supported on the western side of this pier—nave, triforium, and clerestory—have been affected by it. They are all badly cracked, and the columns supporting the interior arches of the clerestory are considerably out of the perpendicular. The string-course also, below the clerestory, is much broken at the joints.

This is as conclusive evidence as could possibly be desired that these arches were resting on the pier in question when the subsidence took place, and as all the arches on both sides of the nave to the west of this pier and the opposite pier are of exactly similar design, with the exception of the north clerestory, and of course the fourteenth century alterations towards the west end, it is clear that the whole of the five western bays of the church on both sides of the nave were standing when this second pier from the east end on the south side gave way.

Now let us see in what condition the arches are which rest upon this pier to the east. Here, again, the evidence is most strangely clear, for although all the arches spring from a lower level on the west than they do on the east, in no case is the jointing at all disturbed. The columns to the clerestory, also, are upright, and the string-course below the clerestory is jointed in a very peculiar manner, evidently for the purpose of bringing it down easily from the higher and correct level to the point down to which the earlier string had been carried by the subsidence of the pier. It is a remarkable fact, moreover, that the course of ashlaring beneath this string-course dies out against the string as it comes down from the higher to the lower level. Again, I ask, could proof be stronger that this work was put up after the settlement took place?

We may therefore take it as proved beyond question, notwithstanding the wide jointing of the eastern work and the fine jointing of the western, that the former is later than the latter, and consequently that unless the nave was pulled down and entirely rebuilt by WILLIAM the Conqueror or WILLIAM RUFUS—a supposition which appears to me to be improbable in the highest degree—then that the five western bays up to and including the second pier from the east end on each side of the nave do absolutely belong to the church which was founded by HAROLD in the year 1056, and was completed about 1060.

By thus reversing the dates of the existing portions of the nave given by Mr. PARKER, and followed by Mr. BUCKLER, it becomes much easier to account for the plan of the choir and transepts, which was discovered in 1863 by Mr. EDMUND LITTLER.

Mr. BUCKLER brings forward the dimensions of the choir as further evidence in support of his theory, and it would indeed be extraordinary if HAROLD had designed the church with the immense choir which these foundations indicate, especially as his institution was for secular canons. But since it is evident that at the beginning of the twelfth century large works were undertaken at the eastern extremity of the nave, it is most



reasonable to assume that these extended to the choir and transepts as well.

In a report on the condition of the Abbey, published in 1860, Mr. BURGESS suggested the probability of HAROLD'S church having consisted on plan of the nave as we see it, short transepts of equal width with the nave, without aisles, and a short choir extending about one bay to the east of the crossing, and terminating in a semicircular apse. This gives a most probable looking plan, and it is very interesting to note that Mr. EDMUND SHARPE in 1874 drew attention to the fact that choirs of somewhat these dimensions, but without the semicircular apse, were adopted universally by the early twelfth-century Cistercians; and I cannot but think it is probable that in thus making short choirs a distinctive feature of their churches these early reformers were merely reverting to a form of church already in existence, and belonging to a period when greater simplicity obtained in the offices of religion.

In HENRY I.'s time, however, the choirs of larger churches were usually of considerable size, and therefore we should expect to find the foundations of an extended building to the east of alterations which, as we have seen, must have been undertaken in the nave of Waltham Abbey during the first quarter of the twelfth century.

But, for my own part, I am much inclined to think that the safest way to account for the great length of the choir at Waltham—as Mr. BUCKLER points out, a length probably greater than that of the nave—is to assume that, although the alterations were commenced, and possibly in part finished, by HENRY I., it was not until HENRY II. established regular canons in place of seculars that the whole of the choir was executed; that is to say, that although the alterations to HAROLD'S church began somewhere about 1120, they were not completed before 1177, in which year the formal institution of the regulars took place.

By these means, as it seems to me, the whole of the phenomena found at Waltham Abbey may be explained in a rational manner. Other explanations which I have seen, and these of Mr. BUCKLER'S now before us, are to some extent plausible, but they do not take into account the whole of the evidence which may be derived from the building itself, and so cannot be perfectly satisfactory.

I feel convinced that any archæologist, especially if he be also an architect, who will go down and study the building carefully, will come to the same conclusion which forced itself upon me in 1875, namely, that the western bays must have been built before the settlement described above took place, and if so, that the probabilities are immensely in favour of the whole of the western portion of the church being part of HAROLD'S original abbey, always excepting the north clerestory and the fourteenth-century alterations towards the west end.

And here I must conclude my observations, space not permitting me to take particular notice of the third portion of Mr. BUCKLER'S work. It contains little, however, which bears upon that side of the discussion connected with Waltham Abbey upon which it has been my endeavour to throw some further light in the foregoing remarks.

### THE ROYAL SCOTTISH SOCIETY OF ARTS.

THE Committee of this Society appointed to award prizes for communications read or reported on during the session 1881-82 report—That the special thanks of the Society are due to the president Mr. Henry Cadell, of the Grange, for his address at the opening of the session; to Dr. William Joseph Black, Surgeon-Major, for his "Account of the Mersey Tunnel, and of the Physical Geography of the River"; to Mr. Edward Sang for his "Lecture on the Transit of Venus in December 1882"; to Mr. David A. Scott, S.S.C., for his "Obituary Notice of the late Sheriff Hallard, past President of the Society"; to Dr. Stevenson Macadam, F.R.S.E., for his paper "On Spurr's combined Wood and Paper Veneers"; to Mr. Richard Kerr Miller, C.E., for his paper "On Diving and Submarine Work"; and to Mr. William Eglin, Glasgow, for his "Account of recent American Inventions in Spring-Hinges, Springs, and Locks." The Committee have awarded the following prizes:—To Mr. Benjamin Askew, foreman smith, for his "Improved Coupling and Uncoupling Apparatus," 20*l.*; and for his "Account of his Discovery of a Method of Welding Cast Steel," 5*l.*—the Keith medal, value twenty-five sovereigns; to Mr. Daniel William Kemp, manufacturer, for his "Description of an Electric Barometer, a new Apparatus for ascertaining Atmospheric Pressure at any distance," a Keith medal, value ten sovereigns; to Mr. Thomas Gillespie, for his "New Safety-gate for Mid-shaft

Workings," a Brisbane medal, value five sovereigns; to Mr. Samuel Benjamin Wilkins, Master of Fire Engines, for his papers "On a Method for Preventing the Destruction of Theatres and the Loss of Life by Fires," and "On Improvements on Fire-shutters and Doors," a Hepburn medal, value five sovereigns; to Mr. Alexander Clark, C.E., Colinton, for his paper "On the Unloading and Storing of Grain," the Society's honorary silver medal; to Mr. Charles Alexander Stevenson, B.Sc. Ed., C.E., for his "New Form of Seismograph," the Society's honorary silver medal; to Dr. Stevenson Macadam, for his paper on "Poisonous and Non-Poisonous Wall Colours and Wall Papers," the Society's honorary silver medal; to Mr. John A. Ross, merchant, for his description of an "Automatic Measuring Machine for Woven Goods," the Society's honorary silver medal; to Mr. George James Wishart, F.C.S., for his paper on the "Manufacture of Sulphuric Acid," the Society's honorary silver medal; to the representatives of the late Mr. Robert Wilson, F.R.S.E., Patricroft, Manchester, for his description of an "Apparatus for Heating Water for Domestic Purposes," the Society's honorary silver medal. The Committee also report that the best thanks of the Society are due to Mr. David Kirkwood, gunmaker, Boston, U.S.A., for his "Description of a Hammerless Action for Breechloaders"; to Mr. Alexander Fraser, M.A., optician, for his paper "On the Graduation of Thermometers with reference to the Measurement of Extreme Cold"; and to Mr. John Greig, jun., engineer, for his "Description of the Tea Manufacture in India, and of a Machine for Cutting the Leaves into Squares."

### THE ARCHITECTURAL ASSOCIATION.

THE first ordinary meeting of the Association was held on Friday evening, the 10th inst., Mr. E. G. Hayes, President, in the chair. Votes of thanks were passed to Mr. Crossland in connection with the visit made to the Sanatorium at Holloway; to Messrs. Croggon & Boyle, Strawberry Hill; to Mr. Birch; and to Messrs. Gardner. The thanks of the Association were also awarded in connection with the conversazione—to the Royal Institute of Architects for the use of their rooms, and to the Entertainment Sub-committee, coupled with the name of Mr. Appleton. Thanks were also awarded to the various donors of books to the library. The consideration of the annual report was deferred to the next ordinary meeting, to be held on the 24th inst.

#### The President's Address.

THE PRESIDENT, in his opening remarks, reviewed the work of the past session. Not to go over the same ground again, he referred his hearers to the practical advice given to the students by Mr. Aston Webb in his presidential address at the opening of the previous session. He did this to impress on them the desirability of adopting a regular and systematic course of study at the commencement of the session. He alluded to the large increase in the number of members, the attendances at the ordinary meetings, and the improvement evinced in discussion of the papers read. The work done in the classes was good; far too few, however, took advantage of them. After touching on other details of the past session, he said—

If we look around we see on every side great activity in the architectural world. There is no doubt that our art has been making great progress in late years. Many large and important buildings have been put up in different parts of the country in almost every known style of architecture. These buildings show in most cases a variety in design and fertility of imagination which is very creditable to the profession at large. All this variety of design and the information necessary to meet the numerous and varied uses of our modern buildings necessarily entail an increased range of study upon the part of the architectural student, and I think that anyone who looks at the history of the Association will see how it has endeavoured to keep abreast of the demands of the age, and to satisfy the probable wants of its members upon all artistic and practical subjects. The so-called Queen Anne revival still continues to be fashionable, and appears likely to hold its own for some time to come. It includes in its modern treatment a wide range of design, which makes it equally suitable for a cottage or a mansion, or for public buildings of almost any kind, and whatever may be the objections to it, we cannot say so much of many other kinds of work. It is adapted to modern requirements in various ways; first because it allows of large windows and plenty of them, and does not altogether ignore the good qualities of plate-glass, for which so many of our clients entertain such an unbounded admiration, while at the same time the artistic eye can be partially satisfied by stout sash-bars and small squares introduced into other portions of the design. Then it does not altogether object to lifting sashes, and it admits of the more artistic treatment of this deservedly popular form of window. Also, on account of its entire freedom from rule or order, it lends itself to all our modern requirements in planning, and at the same time allows in buildings of even the simplest kind internal features to be introduced which give character to the work throughout.

Another important consideration which has made this kind of



work so suitable is that it is essentially a brick style of architecture; and although in its more elaborate developments of carved brickwork it is almost as costly as stone, yet these elaborations are luxuries which need not be introduced. These are some of the chief reasons for the rapid rise and extensive use of this fashion of buildings, and which will in all probability serve to keep it in fashion for some time to come. We know that it is looked down upon and ridiculed by many, and that the detail has been stigmatised by a great poet as "jolly rubbish, which can be rattled off by the mile." This, however, is not an essential quality in the work, although, no doubt, it is a distinguishing mark of much that is done. Many modern buildings might be mentioned in which great refinement is shown in the details and mouldings. I think the charge of want of refinement is with more reason to be brought against the work in its main features and general outlines, in which quaintness of form is frequently carried to a point verging upon extreme ugliness. I leave for the present the question how far these ugly, hump-backed, one-eyed effects are useful in architecture in enabling us to appreciate the more beauty of form and purity in outline when we see them.

We have lately seen some revivals of a slightly earlier type of work, when the mouldings and ornaments of the Renaissance were being engrafted on to the dying-out forms of Tudor work which had preceded. This was to a great extent the type of work visited in the recent excursion—generally picturesque and interesting, often good in form and sometimes in detail, but often coarse both in the one and the other; in any case an undesirable training for a student, who ought certainly to be encouraged to gather his inspiration from purer sources. It would seem that in designing work of this description more than the usual amount of care and taste is necessary to prevent the introduction of features which, however picturesque they may be in themselves, tend to vulgarise the design. These mixtures require to be compounded with great skill and judgment, or they had better be left alone.

We seem to be unable at present to pin our faith to any particular style of work for secular purposes; there seems to be such a ceaseless craving for novelty and variety. This is no doubt due to a large extent to the prevalence of the competition system, the desire or the necessity to produce some startling novelty, some sensational effect, which shall attract attention and purchase obtain the work. Were it not for this, architects would, I doubt not, be willing enough to be "sober in their designs," and to cease striving after eccentricities which tend so much to vulgarise our art, and there would be a better chance of carrying on more generally some kind of work, and possibly developing it in a way that should make it distinctive of the latter part of the nineteenth century.

I ventured the other evening to make a few remarks upon the prospect of a new style in architecture, and to express my opinion as to the possibility, or rather the impossibility, of such a thing. This opinion was based upon the assumption that the various combinations of forms which in past ages have been adopted, and which constitute the different styles, are in reality well nigh worked out and exhausted, and that it is hardly possible to devise any sufficiently new combinations to produce a really new and distinct style. I will not take up your time by attempting to follow out this reasoning, because it can have no practical result, although the subject is one of much interest as a mere speculation. However, I may say this much, that if we are to have anything approaching a new style in architecture, which I am not at all sure is wanted, it will be produced only by combined effort and by steady systematic work in one direction, starting with some particular style as a basis, and training students to work in it alone. Then in time the requirements of the day, being expressed by many minds, may possibly develop into a really modern style. This is, however, but a mere dream. At the present time we are farther from it than ever; all the change and variety in which we are now indulging will certainly not conduce to anything of the kind.

And now let us consider for a few moments what is the chief end and object of all our work here. It is in order that we may endeavour, as far as possible, to follow out the advice given in our motto—"To Design with Beauty, and to Build in Truth." How difficult it is to arrive at any proper appreciation of what is really required by the first part of this instruction, and how much more difficult it is to explain! We can, no doubt, all talk glibly enough about beauty in architecture, and each one of us probably thinks he knows what he means, but it is not easy, if not impossible, to define it closely. Mr. Fergusson, in his work upon the subject, says:—

One of the most prevalent sources of error being the assumption that beauty is one single and well-defined emotion, and capable of being reasoned on as such, whereas, in truth, nothing can be more various and at the same time more universally prevalent, and so variously are we formed that to no two men is it the same thing, though all can perceive it, and most men fancy they see it as others do; so each man assumes the beauty he sees or can appreciate to be the only true one, and excludes all others from the category.

This is very true, because, in considering the question in regard to architectural design we are confronted at the outset by the fact that, unfortunately, architects who make these questions the study of their lives are so seldom able to agree as to the

merits of any particular work. There are, of course, the differences of opinion caused by a partiality to some particular style or period of work. A Gothic man cannot see any beauty in a Classic design, or the reverse. However, differences of opinion arising from any of these causes must be disregarded as not worth a moment's consideration, being prompted by individual taste or by fashion, both of which nowadays change rapidly. There is no doubt that each style may lay claim to some particular merits, that all have some qualifications which may entitle some buildings erected in them to rank as works of art and beauty. These qualifications may be defined somewhat as follows:—A perfect sense of repose, of constructive fitness and suitability, a feeling that everything is in its place exactly where it is required, and a sufficiency of ornamentation to impart proper richness of effect, but no excess; in one word, the work must be well proportioned. The word for this purpose must be taken in its widest sense, and must regulate not only the quantitative relation of the various masses and voids, but the size, position, and amount of all the accessories, such as mouldings, carving, and other ornament. In a perfectly well-proportioned building it will be found either that the bare forms of solids and voids are such as to satisfy the eye by their proportions, and that the arrangement is such as not to be materially affected by the addition of the mouldings and ornament, or it may be that the building requires the addition of its mouldings, strings, or dressings to complete the forms intended, and to make them satisfactory in their individual proportions or relatively to each other.

A great deal has been written and said at different times upon the subject of proportion in buildings, and many attempts have been made to show that beauty in proportion—that is to say, satisfactory relative dimensions of the various parts—is founded upon regular geometrical forms, and that without such geometrical basis such proportions can hardly be satisfactory or beautiful. It is not possible for me now to attempt to discuss this question; it is one of great interest and well worthy of close attention. However, I must say this, that although I believe there is a great deal of truth in the system proposed, I do not think it is possible or hardly even desirable to reduce the process of architectural design to any such almost mechanical method. The variety of form is so great, and the requirements of our art so various, as to baffle any attempts to systematise them on a geometrical basis. Ruskin, in his "Lamp of Beauty," says:—

Proportions are as infinite as possible airs in music, and it is just as rational to attempt to teach a young architect how to proportion truly and well by calculating for him the proportions of fine works, as it would be to teach him to compose melodies by calculating the mathematical relations of the notes in Beethoven's "Adelaide" or Mozart's "Requiem." The man who has eye and intellect will invent beautiful proportion, and cannot help it.

Now it seems to me that the idea suggested by this quotation is the true one, and I do not suppose any one will disagree with the proposition. I wish particularly to commend it to your consideration, with this addition—that the question of fitness and suitability in architectural proportion is to be judged readily and satisfactorily by the eye alone, but that in order to do this the eye must have been trained by a course of study which shall enable it to appreciate the true and the beautiful.

There are and must necessarily be many different degrees of beauty in architecture, as there are in nature, and the differences are caused by the predominance given to one or more of the various qualities of which it is constituted. It is not possible, perhaps not even desirable, for many buildings to possess the highest form of ideal beauty which I have been endeavouring to describe. In buildings of the highest type the world has ever seen, such as a Greek temple or a Gothic cathedral, the effect is produced by the careful blending in the composition of all these qualities, and the result is the production of works of sublimity and grandeur which have never been equalled. These results of sublimity and grandeur can only be obtained in buildings of considerable importance or monumental character; in most cases we can only attain a much lower standard, until at the lowest end of the scale we must be content with an honest expression of the minor requirements, and with such forms and proportions as good taste may suggest, only taking care to prevent the introduction of meaningless and vulgar ornament which one so frequently sees, and which spoils what might otherwise be a satisfactory design. Buildings of this kind may be exceedingly plain in outline, entirely devoid of ornament, of quaint, squat, or ugly proportions, but yet bearing upon their face clear evidence of the designer's thought and care. Such buildings, I say, are of great value in the architectural world. There is a beauty in their simple form, in their plainness, in their quiet proportions—in short, in their extreme ugliness, which is of the same use in architecture as the ungainly form of a hippopotamus is in the animal world; that is to say, to set off by contrast other forms and other proportions which are better, and in which more excellences are combined. At the same time it must not be forgotten that even this perfection in ugliness is not achieved without much care and study.

The sense of a keen appreciation of beauty of form and proportion is one which every student should endeavour to acquire. This sense is, I believe, to be most readily obtained by a diligent



course of study from the human figure, and such a course is most desirable for an architectural student. By carefully drawing the figure in outline, or with some rapid kind of shading, not attempting any of that delicate but rather mechanical stippling that we are accustomed to see practised in our art schools, the student learns in time to appreciate delicacy and refinement in form, and the subtleties of perfection in proportion, in a manner and with a rapidity which is, I believe, attainable by no other means. I am told Mr. Burges always attached very great value to this kind of study, and said that he regarded it as a most essential element in the education of an architect. The facilities offered for work of this description in the various schools of art in London are available to all students. I may also draw your attention to the Langham Club, of which particulars are given in our Brown Book. In addition to this drawing from the life, the architectural student must neglect no opportunity of drawing and measuring such executed works as may commend themselves for the purpose. The objects to be attained by architectural sketching, I take it, are threefold :—

1. To obtain a practical familiarity with the forms and details which were in use, and which constitute the distinctive features of a style, and which cannot be learned from books alone, and to study their proportions.

2. By studying features which are admirable when executed, and transferring all particulars carefully to paper, to acquire a knowledge of the reverse process.

3. To lay up in the mind stores of forms and ideas which can be and are unconsciously drawn upon in designing, and which materially assist in combination of new forms.

Under the first heading would be classed all the carefully-drawn outline sketches which are or should be made by a student, and in making them the objects to be gained should not be forgotten ; these are to learn the character of the work and to study the proportions (which, of course, by the selection we assume to be good), but certainly not to make pretty pictures. It is important to pay attention to these points. One frequently sees brilliant, showy sketches rapidly done, but far from being true representations of the portion of the building sketched. It is hard to see how work of this kind can be of much value. With the second object in view—namely, to learn the relative effect of features upon paper and in stone—the best plan undoubtedly is to draw and measure the work, and to plot it to scale upon the spot. It is much better to do so than to leave it to plot afterwards, because it can be done with greater accuracy. And it is as important, if not more so, to measure and draw out the mouldings as the complete feature, in order to learn the effect that the different sections have when executed in the round. The third object is of course attained by drawings of both the kinds we have been considering, but the various notes and little bits which one does from time to time are done solely with this object. These little sketches are not to be allowed to take the place of the other two kinds referred to, but only to supplement and follow them. These small sketches are often necessarily roughly done, and an architect looks upon them simply as memoranda to give him hints for new combinations, and trusts to his own power to adapt, modify, and shape them as occasion may require. In these days of changing fashion and requirements, and of the frequent necessity there is to make a design rapidly, it is of importance to every architect to have a store of such material laid up in the recesses of his mind, and he is likely to succeed best who has the largest store to draw upon.

One word as to the manner of sketching before leaving the subject. Ruskin says : “ All merely outlined drawings are bad, for the simple reason that an artist of any power can always do more, and tell more, by quitting his outline occasionally, and scratching in a few lines for shade, than he can by restricting himself to outline only.” And again, in another place : “ A good artist habitually sees masses, not edges, and can in every case make his drawing more expressive with any given quantity of work by rapid shade than by contour.” Now, how far are we as architectural students to consider it desirable to follow this advice ? The answer seems to be that, so far as we are simply studying effects which we see executed, in order to be able to produce similar effects from geometrical drawings, outlines are the best. But if we are wishing to carry away memoranda of massing and general effect, or of details, this is more effectually and rapidly done by means of shaded sketches.

The necessity of following out, as far as possible, the advice contained in the second part of our motto is one which we shall no doubt all be ready to admit. It is desirable, apart from any question of truth or honesty in the interests of art, for nothing can be really beautiful unless it is true. The beauty that is attained in a building by honestly expressing the arrangements and requirements of the interior ought to be of more value than that which is obtained when the necessities of the interior have been sacrificed to produce it. And this honesty of expression as regards the elevation of a building is the chief thing to be considered, because there is, I think, no more necessity, as a matter of principle, to insist upon the details of construction in architecture being shown for the sake of truth and honesty than there would be for insisting upon our seeing the framework or skeleton of every leaf and flower that grows, and of every being upon the face of the earth. There can

be no objection, but rather the reverse, to cover up, clothe, and decorate the rough unsightly forms which compose the framework of a building whenever desirable, and it only becomes wrong to do this when the covering is used to disguise and apparently alter the forms, and not merely to cover them, or when it is done with any intent to deceive. The requirements of modern building unfortunately often compel us to do things which are and cannot but be most unsatisfactory, artistically speaking ; such, for instance, as the small supports and wide openings filled with plate glass which are required in shop-fronts. It is impossible to make anything decent of this sort of thing, either by showing the supports and girders or by casing them ; the latter plan I think generally preferable, for several reasons. But there really are very few cases in which an architect is tempted to disguise his construction in any way, and it is always made more satisfactory to ourselves so to proportion our work as to satisfy the eye and mind of the observer. Then, with regard to truth in finishing and decoration, for similar reasons it is quite permissible to clothe and cover up any common material for the purpose of adding a better surface. Why should it have been thought almost wicked to plaster the walls of churches, as it was some time since ? If one cannot afford to build the walls with a material which has a sufficient finish for an inside lining, it is much better to plaster them. There is no deception done, or intended to be done. The question of painting in flat colours *v.* graining has been often considered, and the flat colouring is generally voted the more artistic treatment. There are many advantages in the other method, but although it rarely does deceive, whatever may be the intention, we must not hesitate to condemn it on principle ; and, as a general rule, the treatment of one material in more or less direct imitation of any other is to be deprecated.

I think it was Professor Roger Smith who paraphrased the language of Demosthenes in saying that the three chief qualifications in an architect are—“ 1st, Drawing ; 2nd, Drawing ; and 3rd, Drawing.” This, no doubt, is good advice, but I think it requires a certain amount of modification. There is a great danger, nowadays, of falling into the opposite error of forgetting that our drawings, after all, are but a means to an end, of making them as if they were merely intended for pretty pictures, and not as an honest attempt to show a building as it would appear. This is what another learned professor said upon the subject :—

Let architects be sober in their designs, let their drawings be made so as to represent the building as the building would be when it was built, eschewing all those tricks and peculiarities of draughtsmanship which were so charming in a picture or an etching. Then if the building were bad in design it would appear bad in the drawing. A great deal of bad architectural work at the present time was to be attributed to nothing more than the self-deception of the designer by his draughtsmanship.

Now we have in these two opinions some apparently opposite views upon the subject ; the one seems to magnify unduly the necessity of drawing, and the other implies from the cautions conveyed that the drawing of the present day is frequently made too much of ; that the draughtsman, in his desire to make a pretty and attractive drawing, entirely overshoots the mark, and deceives himself as to the effect that will be obtained when what he is supposed to be representing is carried out in brick and stone. This over-elaboration in drawing—this, so to speak, wilful perversion of the truth—is no doubt, to a great extent, the outcome of the system of perpetual competition under which architects now suffer, and in these cases we can only look to the forthcoming rules and regulations for the remedy. We must, I think, all admit the necessity for caution in this respect, and bear in mind, as architects, that as a good design may undoubtedly be marred and spoiled by bad drawing, we must be able to express our ideas upon paper so as to convey a correct impression of our building ; but we must never allow ourselves to be carried away by the desire to make a pretty picture only, and deceive ourselves as well as our clients. Manual dexterity is no doubt a good thing, but it may be made too much of, and mislead woefully, and in any case it plays a secondary part to that more important qualification, a correct and well-trained eye. It should be the aim and object of all architects so to refine and elevate their work that it may show to an educated observer unmistakable evidence of the thought bestowed upon it. In proportion as this is the case, so does the building rank as a work of art, and its designer may lay claim to the title of artist.

The world has lately been informed by a great legal authority that architects can have no claim to that title, not so much even as a hairdresser ; and why ? Because they do not work with their fingers. It is hardly worth one's while to take any notice of such a statement. We all know that real architects do occasionally have to use their fingers. I only refer to the subject because I have been at some pains this evening to impress upon you that it is the spirit of our work that is of the greatest value, and that the fingers are but agents—most necessary ones certainly—to convey it from the mind and eye on to the paper. It must also be observed that the power of fully appreciating, as of producing, beautiful works is not acquired by study of the law, or of mathematics, or even of campanology, but by careful and loving study of the beautiful in nature and art, and an earnest desire to apply the principles learned to our own work.

I have endeavoured, in putting down these few thoughts for



your consideration this evening, to touch upon some of those matters which, whether as architects or students, should ever be uppermost in our thoughts. It is both pleasant and profitable for each one of us, amid the hard matter-of-fact details of everyday life, to study and think them out for himself.

Mr. STANNUS proposed a vote of thanks to the President for his address. The Queen Anne style had, he said, as the President remarked, a wide range. The range was too wide for a student, as it had become a haven for all wretched and impure detail, thrust out elsewhere. Architects now saw the evil they had let loose, and were trying to keep it within bounds. It was getting purified, and would eventually pass into pure Classic. No recipe could be given for proportion, though principles as to what was bad and to be avoided might be laid down. The sense of proportion could not be learnt by teaching or argument; it should be acquired rather by accustoming the eye to look at objects of acknowledged good proportions. A new style of architecture might arise, but he doubted it. In the Elementary Class of Design this year one subject would be taken through all the styles. By working the same subject through all the phases architecture had passed through, the student would learn the various features of different styles, which would suit themselves to the wants of the present day if amalgamated.

Mr. CLARKSON seconded the vote of thanks, and remarked that the President had made a good apology for the necessity of draping unsatisfactory features of construction. He had perhaps hardly insisted sufficiently on the fact that they were by no means proud of such work, though they admitted its necessity. Architecture that was thoroughly one from foundation to roof-tree belonged to quite a different category from the make-shift style necessitated by the exigencies of the present day.

Mr. JAMES SMITH expressed surprise that while the number of members in the Association increased so largely, the classes were standing still; so few comparatively availed themselves of the opportunities of study afforded by them.

Mr. ASTON WEBB said he had heard with pleasure the President's remarks on educational matters. The results of the Institute examinations had proved that students of architecture were willing to make every effort to qualify themselves for practice, and to take advantage of all opportunities afforded them for study, and this being so, he considered they should still keep before their eyes the idea of an architectural college, and work away for its establishment. He believed, as regarded a new style, that the past years had witnessed an analysis and study of styles, resulting in design worked out from Classic and Gothic, and it was frequently difficult to say from which end the designer had worked.

After some remarks from Mr. COLE ADAMS, the vote was put to the meeting; and the President having replied, the proceedings terminated.

### THE NORWICH SCHOOL OF PAINTING.

A PAPER was read by Mr. T. Palmer at the closing *soirée* of the Art Loan Exhibition at Swaffham on "Crome and the Norwich School of Artists." He said—The artist of whom the county of Norfolk was justly proud is "Old Crome." He had a son, John Berney Crome, also a distinguished painter. The few remarks he was about to make arose from his (the speaker) having seen in the news of the day that in a sale of pictures two by Old Crome were sold for a high price. It was said after the sale that some doubt existed whether those two pictures were not by his son, J. B., generally called in art circles "Young Crome." More than fifty years since he (Mr. Palmer) was, like many other boys, a pupil of J. B. Crome, and he mentioned that in order to say that at that time the small things by Old Crome were in no great repute; moderate-sized finished oil pictures could be bought for 4*l.* or 5*l.* each, and there were plenty to be had at such low prices. His son informed him that for some of his large and best pictures his father occasionally obtained 40*l.* and 50*l.*, and perhaps a trifle more. He had a hard struggle to get a decent living for himself and family. Old Crome was not the fashion; out of Norfolk he was not appreciated, and there he was content with the low prices he had named; but high figures were given to some men. When Crome died Turner had grown rich, but poor old Crome's family were unprovided for. In looking at old Crome's works you will not observe much decided or sharp pencilling, only now and then a little in the lights. His foregrounds and middle distances generally run into each other by almost imperceptible gradations; not many strong contrasts in colour, nor striking effects in light and shadow. The general appearance of his pictures is very sober and quiet, but very natural, and you are impressed with the idea that you have seen many such a landscape; and so you have. They are wonderfully true to nature in that particular garb in which he thought fit to represent her. He (the speaker) recollected nearly twenty years since seeing two pictures by him of rather large size in an exhibition at Norwich, one representing the Boulevards in Paris, the other a seaside scene with many elaborate figures. These sort of representations were entirely exceptions to the usual practice of Old Crome, and some discussion ensued as to whether the pictures were painted by him. Henry Ladbroke informed the

public that he saw Old Crome painting them, and so put that doubt at rest. He (Mr. Palmer) recollected the pictures perfectly, and that they were painted as well as Bonington could have done them. He considered that Crome shone most in painting an open heath scene, a gravel-pit, a few large oaks in simple landscape, a farmhouse with a few trees, or a wild river scene with a few boats. The simpler, the more the subject suited him; and in such scenes he always appeared to him to be in painting; what Bloomfield was in verse—simple, natural, and unpretending; and such are the pictures in which, to his mind, the genius of Old Crome appeared to the greatest advantage. He had seen pictures by him of a more elaborate character. The great difference in the pictures of Old Crome and his son is this—that those of his son are not so artistic, and never have that quiet, sober tone and character which his father's always had; and although his son painted some nice pictures there is not in any lane or other country scene depicted by him that peculiar rusticity of character which the father so well portrayed, and which is so eminently necessary in pictures of that description. It was quite refreshing to look at one of Old Crome's sober things, after the fine colours and far-fetched effects now seen in painted landscapes. It was this quality of rusticity which the son missed, and it was the presence of this quality in the pictures of Old Crome which made them so far superior, not only to his son's pictures, but to those of every other Norfolk man. The father and son frequently painted moonlights in the same tones, and remarkably well; but the difference here also was in favour of the father, inasmuch as the son, by his dashing style, left them rather hard, whereas Old Crome's softer method gave his moonlight pictures a sort of dreamy appearance, very appropriate to the subject. But the moonlights of both the Cromes are superior to the pictures of that class by any other painters; they have a peculiar yellow indistinctness of tint, yet luminous, which he (the speaker) had never observed by any other hand. Such were the differences in the paintings of the father and son, and they are discernible by any person in the habit of seeing the works of other painters. He would have his hearers beware how they laid out their money about Old Cromes—they were manufactured; for his part, he had never dared to buy one. There were many Old Cromes, genuine pictures, now in the county, and when sold fetch high prices, and will continue to do so, because they are true to Nature as she shows herself in our lanes and fields and rivers—they were not like very many of those gaudy canvases in our exhibitions which were meant to represent her. Too many artists paint a scene, not in colours like those Nature puts on, but in such colours as they think she looks the best in. Old Crome, above almost any other painter, was a delineator of Nature in her everyday appearance; he aimed at no out-of-the-way effects; he only sought to paint what he saw, and what everybody else might see, and he did it admirably. The speaker said his first intention was to have said nothing further about the Norwich painters, but all of them having lived in his time, and most of them personally known to him, he would say what he had thought and known about the rest of them, and more, too, about Old Crome, and, as their works were appreciated, it was a pleasure to recount the doings of people he had known and respected. William Crome painted some very nice pictures, neat and artistic, but he did not succeed. Miss Crome, his sister, painted birds and small landscapes in good taste; these two were children of Old John Crome. In his (the speaker's) school days the pictures of George Vincent were often to be seen in and about Norwich. He was talented, but, like many another clever artist, ruined himself by excesses. His position in art was secured by the large picture of *Greenwich Hospital from the Thames*, and which of late years has been seen in the Great Exhibition. One of the most prudent of Old Crome's pupils, and a very good painter indeed, was James Stark. His pictures realise good prices. His views on the rivers of Norfolk are very beautiful. Many of the engravings from those pictures, by the best engravers of the time, show how he could depict, in a natural and artistic form, the beautiful scenery of the Wensum, the Yare, and the rustic neighbourhood of Norwich. *The Duck Decoy* and *The Sheepwashing*, and many others, are capital. Some of his later pictures are dull, and want variety and force. The willows in his best work are extremely pleasing, and harmonise well with the oaks and other sturdy trees around them. John Crome, besides the pupils above mentioned, had many others of respectable abilities, and the amateurs of his day in Norwich were numerous, and some of them very clever. He kept alive the artistic spirit in his own county, but he was not prosperous; those were the days of war, frolic, and the Regency, and if the Norwich artists did not save much money, they enjoyed themselves (too often, perhaps, in high jinks)—they had merriment, and were respected. The artists of Norwich, with Crome at their head, were especially fond of a day on the river, and we can fancy him and two or three others on board sketching, laughing, and enjoying themselves, and finishing up at one of the riverside inns, and making a jolly night of it. He was always looked up to, and was the centre of a notable company in the eastern counties. John Sell Cotman was another Norfolk artist of celebrity, flourishing at the same time with Crome, and his pictures are much sought after by collectors. Some of his water-colour drawings are beautifully true to nature and elaborate. He



had two sons, artists. Miles Edward painted in oil and water-colours. His pictures of shipping are very clever. John Joseph Cotman, the younger son, who died in March 1878, was an extraordinary person, very irregular in his habits, and during the last ten years of his life was at times almost a lunatic. Many of his pictures during the latter period were peculiar—yellow clouds and wonderful trees. But in his best days he was one of the most talented artists of the Norfolk school. Some of his drawings are very beautiful; no more splendid sketches can be seen by any artist than some of his before his mind was affected by drink. Perspective and air were never exhibited in greater perfection. Had he been a prudent man, he must have been in the front rank, and some of his things will before long take a high position. We are proud of our country gentlemen, as we ought to be, as their worth and consideration for their neighbours are fully testified upon the walls of this exhibition. A few months before poor J. J. Cotman died a very worthy Norfolk squire commissioned him to do a sketch or two on his estate. One view was an old wooden bridge, with very picturesque surroundings. Cotman, instead of using reality, used his imagination, and put in a fantastic cottage and other accessories which did not exist, with outrageous clouds. The squire rather objected to these things, and the painter went into an harangue about genius and all that, and quietly gave the patron the notion that he was as mad as a "hatter," and that the picture quite partook of the infirmity. However, the price was paid, and off went Cotman to the neighbouring alehouse, where he had been staying some days. During the evening he became very friendly with an old shoemaker, and supplied him very liberally with the good things the house afforded. At last they quarrelled, and Cotman, in an arrogant manner, called the cobbler hard names, and had to put up with the vulgarity of his illiterate opponent. Another young artist began at the same time with Old Crome—Robert Ladbroke: he and Crome married two sisters, and commenced in partnership as teachers of drawing. Crome was fond of company, a dashing fellow, with great ideas; his brother-in-law was plodding, prudent, and took care of what cash came in his way; taught his family to be so, and acquired a competency for his old days. Ladbroke never achieved much renown; his style was not attractive; but by painting and teaching he saved money. He had two sons, artists. John Berney Ladbroke, a bustling little man, taught drawing and painted for sale, built a nice little house on Mousehold, with Kett's Castle in his grounds. His pictures fetched large sums. His works, he thought, would not be considered to be of high order of merit. Some of his pictures of oak trees are well done, and his pictures are pretty; but from continual painting in his studio they are mannered, and have not the quality of nature to be observed in those of the Cromes, the Starks, and Cotmans. His foliage is flat; he does not understand light and shade; they want air and perspective; and are rarely enlivened with figures. He prospered, and deserved it. Henry Ladbroke painted more after the manner of his uncle Crome—his colour quiet, and often of good quality. He appreciated the scenes he depicted. He (the speaker) had travelled a good deal with him, was a very intelligent man, talked well about art, and his anecdotes of the artists of the olden time were very entertaining. He has been dead many years. Another family of Norwich artists were the Stannards, and their fame is well sustained by Miss Stannard, whose representations of fruit and flowers may well challenge comparison with the most admired painters of those subjects. The productions of the Hodgsons and others might be mentioned as partaking of the genius of the school. James Tillett's (of Norwich) pictures were neatly executed. Mr. Barwell, although an amateur, must not be forgotten, through his long life he was a staunch supporter of the Norwich school. He was a most accomplished artist, as were most of his family, and one of his sons followed painting as a profession. The Norfolk artists are now much more esteemed than in Crome's time. The reason for their pictures commanding high prices in a London sale-room is not far to seek. As Burns in his humble jingle and rustic language gave us the scenes of every-day life in descriptions so natural, so Crome has achieved a success with the like materials as great as any artist England has produced.

**Birmingham.**—Mr. C. Ede, the well-known milliner of Birmingham, has been erecting a number of shops, situated in Constitution Hill, one of the leading thoroughfares of the town. They are very conveniently arranged, and in the early Gothic style, freely rendered. Considerable picturesqueness has been attained in the elevation by a series of bay windows, two storeys in height and diminishing in width, terminating with panelled and enriched pinnacles. The parapet is ornamented with stone panels and trusses, moulded bricks and terra-cotta, and a considerable amount of carving. The front of the building is relieved by bands of moulded stone and brick, terra-cotta panels, and stone diapers. The shop-fronts have weathered and bracketed cornices, carved trusses, &c. The chimney caps are entirely of stone, and of an ornamental character. The work has been performed in a very creditable manner by Mr. Evans, builder, from designs prepared by Mr. J. Statham Davis, architect, both of Birmingham. The cost of erection, when the shops are entirely completed, with fittings &c., will be about 5,000l.

## EDINBURGH ARCHITECTURAL ASSOCIATION:

THE first meeting for the winter of the Edinburgh Architectural Association was held on the 8th inst., Mr. D. M'Gibbon, the newly-elected President, in the chair. In his opening address the President reviewed the past history of the Association. It was instituted, he said, in 1858 by a small number of young men interested in architecture. It was then more of a debating club than an architectural association, as they now regarded the term; but its founders were enthusiastic and in earnest, and resolved to persevere in their efforts to establish the Association on a firm basis and extend the field of its operations. Animated with such a spirit, the Association grew and prospered. In a few years the number of members had increased from seven or eight to about fifty, and now there were not less than 150. It was in 1860 that he first came in contact with the Association, having been applied to by the secretary to see whether an amalgamation could not be effected between this Association and the Architectural Institute of Scotland. He highly approved the proposal, and urged it on the Council of the Institute; but it unfortunately was not carried out. He regretted that, believing that the amalgamation would have been greatly for the benefit of both societies. The result would probably have been that they should all along have had in Edinburgh an important and prominent society to represent their profession. However, the laws of nature must be obeyed, and the process of natural selection seemed to have determined the survival of the fittest in the person of the Association. Perhaps, after all, it was well for the Association that the amalgamation was not effected as then proposed. The Association had thus been compelled to fight its own battles and push its own way. Its growth had been more natural than if forced forward at an early stage of its existence, and therefore he believed it would be found more enduring. Already this Association had achieved for itself a good position, and a considerable number of gentlemen who formerly took an interest in the Institute had joined its ranks. He trusted that shortly all the architects in Edinburgh would be enrolled, and thus complete in an unforeseen way the amalgamation contemplated long ago. After referring to the publication of the Sketch Book as a matter deserving continued encouragement, the President gave a review of the work cut out for the Association during the ensuing winter, and then proceeded to explain that arrangements had been commenced for the holding of an architectural exhibition, to include paintings, drawings, sketches, photographs, detailed drawings, and every kind of pictorial representation of their art. The Council, he said, were strongly of opinion that such an exhibition, under the auspices of the Association, would not only be an excellent thing in itself, but would prove advantageous to the Association by bringing it more prominently before the public, and asserting its position as a representative body. After considering various places for the exhibition, they at last thought that the scheme had grown to be of sufficient importance to warrant an application to the Board of Manufactures for the use of some of the rooms where the exhibitions of the Royal Scottish Academy were held. This application had been granted, but the rooms could not be put at their disposal till December 19. It was thought that the hanging of the pictures might be completed in eight days, and that the exhibition might be opened about December 26. It was proposed to open with a *conversazione*, to which each member, with a lady, should be invited, besides a number of leading citizens, artists, and others interested in architecture. The exhibition would remain open for a fortnight, and a charge of sixpence for admission would be made. As it would be open during the Christmas holidays, it was believed that many of the public would gladly avail themselves of the opportunity of studying architecture, ancient and modern—an opportunity such as had never been before presented, as far as he recollected, in Edinburgh. Drawings were to be invited from architects and others in every part of the country. Already a number of gentlemen, in Edinburgh, Glasgow, and London, had been communicated with, and everywhere the idea was warmly supported. It was expected that every member of the Association would do his utmost to render the exhibition a great success. Not only large and finished drawings were wanted, but architectural sketches, framed or unframed, would be well received and suitably hung. It would be necessary to appoint a large special committee to carry out the arrangements. As to the cost of the exhibition, seeing they got the rooms gratis, it was hoped that the admission money would about clear expenses; but should there be a deficit, the success of the exhibition was considered of such importance to the Association, that it was believed there would be no difficulty in raising the sum requisite by subscription among the members.

Mr. Brown having expressed some doubt as to the amount of support likely to be received from the public in the way of attendance, Mr. M'Lachlan submitted that, if they got the best works of the best London men, and formed a large collection of designs by old Edinburgh architects, and had busts and portraits of the architects themselves, and sketches of old buildings, the exhibition would prove very interesting, even to those who were not architects. He proposed a vote of thanks to the President for his address, which was duly accorded.



## NOTES AND COMMENTS.

THE following papers will be read at the meetings of the Leeds Architectural Society during the present session, 1882-1883:—"Constructional Ironwork as applied to Architecture," by Mr. F. CAMPIN, C.E.; "The Foundation of Art in Architecture," by Mr. E. R. ROBSON, F.S.A., F.R.I.B.A.; "The Place of Tradition in Modern Design," by Mr. J. D. SEDDING, F.R.I.B.A.; "Kirkstall Abbey," by Mr. J. WREGHITT CONNOR, F.R.I.B.A.; "Art Foliage," by Mr. J. K. COLLING, F.R.I.B.A.; "Wakefield Town Hall," by Mr. G. B. BULMER; "Hindrances," by Mr. J. HONEYMAN, F.R.I.B.A.; and "Recollections of Flemish Architecture," by Mr. WILLIAM H. THORP, A.R.I.B.A.

In a report just issued by the Board of Trade respecting their proceedings under the Weights and Measures Act, 1878, it is stated that there are nearly 700 different designs of stamps in use for the verification of weights and measures. The Board of Trade is, it appears, making efforts to obtain a uniform design of stamp for use by local inspectors, and with considerable success. Many local authorities, however, prefer for local reasons to keep their old designs, and with the view of facilitating the identification of these by inspectors fac-similes of them are attached to the above-mentioned report. It is further stated in the report that, in consequence of representations made to the Board of Trade by Chambers of Commerce and others as to the loss and inconvenience which arise from the variety of sizes of wire gauges now in use in trade, the question of legalising a standard wire gauge is now under consideration.

JUDGING from several sales that have lately taken place, the value of old family houses in France is wofully declining. A remarkable instance of sacrifice is that of a château near the town of Auxerre, which, although dating from the latter part of the seventeenth century and containing some very fine monumental carvings and chimney-pieces, as well as ceilings painted in historic subjects, was lately disposed of for the paltry sum of 17,000*fr.* (68*ol.*). The reason of this extraordinary depreciation in the value of country houses and what the French call pleasure properties (*propriétés d'agrément*) situate in the provinces, lies in the increasing indisposition of the rich and upper classes to live for long out of Paris or some other large centre, except it may be for the annual trip to the seaside. It must be remarked, however, that this tendency in the case of châteaux and properties either historically famous, surrounded by particularly beautiful scenery, or situate within easy distance of the principal towns, has been in considerable measure counterbalanced by the eagerness of foreigners—especially Americans and Russians—to possess themselves of a seigneurial domain in *la belle France*.

THE Wigan Town Council announce that it is intended to introduce a Bill into the next session of Parliament giving them the same powers with respect to mines under their sewers and works as are possessed by railway and waterworks companies respectively. The Corporation state that they are encouraged to take this step by the Local Government Board. It is probable that a public Bill, having similar objects, will be promoted by the Government, and in the event of that measure passing no further progress will be made with the local Bill. The Wigan Corporation have been inviting the neighbouring towns to share the responsibility for the expenses of the Bill. It is remarkable to find local authorities powerless in dealing with mines, but it was not anticipated by the Legislature that sewers were likely to be injured by settlements which arose from mining operations.

FROM the latest statistics issued by the municipal authorities it appears that Paris possesses 82,352 dwelling-houses. The number in 1876 was only 71,873, so that the increase in a little over five years has been 10,479, or about 2,000 per annum. These figures by no means, however, represent the number of new buildings erected during that period, for during these five years no less than 7,325 houses have been pulled down, so that the new ones built amount to 17,804. It must be remembered, moreover, that the new constructions are on an average much larger than those demolished, and the number of inhabitants per house in Paris now reaches 27.

It seems that the Greek Government are at the present moment devoting particular attention to the development of the country by means of an extensive system of public works. M. TRICOUPIS, the Premier, having applied to the French Government for aid in carrying out his projects, ten engineers are to be sent out from France to superintend their execution, and M. RONDEL, Chief Government Engineer of the Poitiers district, has already left for Athens to undertake the direction of the whole system, which consists chiefly in the construction of good roads and several lines of railways.

THE latest of Mr. MILLAIS' representations of child-life is the *Pomona*, which has been added to Mr. TOOTH's exhibition. It is free from the surroundings which have been introduced in the *Mrs. Gamp* and some other of the painter's works. In this case the young lady is not masquerading; she is represented filling a big barrow with apples in an orchard. Like others, which may be said to form a series with it, the figure is a three-quarter length. The girl is dressed in white muslin, with a mob cap and a blue sash. In the face and background Mr. MILLAIS is at his best, but the apples and barrow have the crudeness he sometimes affects. The picture is to be engraved, and we hope justice may be done to it. Of late years the best reproductions of Mr. MILLAIS' figures are often found in the plates of the illustrated papers. Some of the expensive mezzotints do not suggest the original works.

THE Prix Troyon will be awarded by the Académie des Beaux-Arts during the course of next year. On this occasion, moreover, its value will be doubled. The subject set for competition is: "Oxen harnessed to a waggon, with waggoner alongside, descending a narrow and difficult road through a forest—in early morning." This competition will be one of the great events of the artistic year.

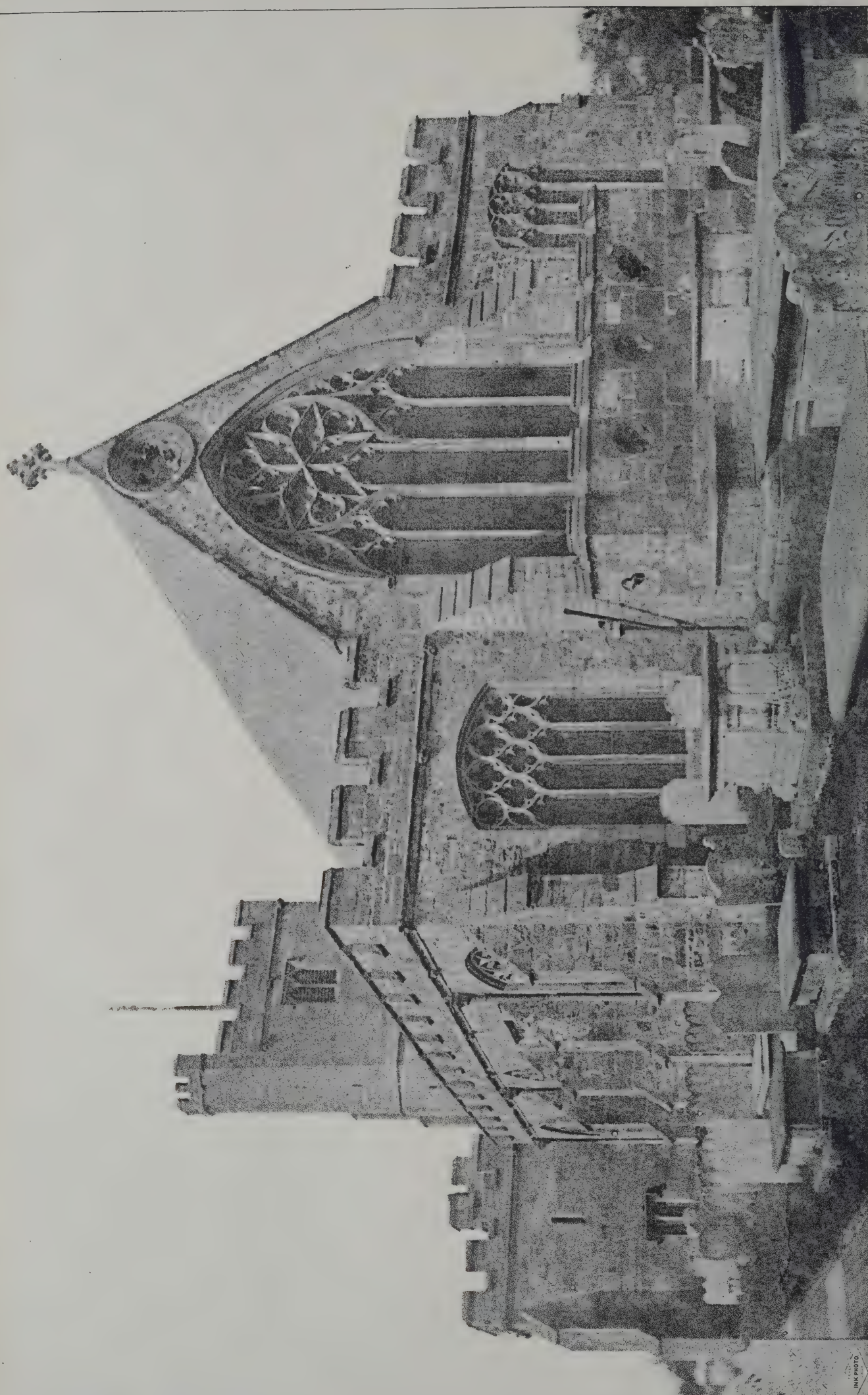
IN Eastbourne there seems to be some difficulty about the plans for the proposed Town Hall. They appear to have been prepared by the building surveyor of the Local Board. Another surveyor in the town was employed to take out the quantities, and on analysing the plans he declared that they were not what they ought to be. In a letter to the Parliamentary Committee he wrote—"Passing over the inconsistency of the inside with the outside style of architecture, I beg to state that I am not *merely of opinion*, for that involves doubt, but *certain* that the works cannot be carried out in accordance with the plans in their *present condition*. The specification is, for an important building, the most deficient I have ever seen (and I have seen a great number), the omissions being many and serious. I have, as far as possible, supplied these omissions in the bills of quantities, which are therefore sufficient to cover the cost of erection, of course excepting modifications or additions that may be made during the progress of the works. With regard to the practicability of erecting the building, it can be carried out if the plans are altered, proper detail drawings made—the quantities being altered accordingly—and the specification corrected and completed." Both surveyors having supporters among the members of the Board, the subject has been the cause of the expenditure of a great deal of debating power. It was proposed to submit the plans to the County Surveyor, but this was rejected. The tenders for the works are, however, to be sent in on or before December 1, and it may safely be assumed that if there are defects in the plans, they will be ascertained before that time by builders.

THE *Société libre des artistes français* held a general meeting last Saturday evening in the Salle de la Redoute, for the purpose of electing a new committee for the year 1883. The vote resulted as follows:—*Painting and Engraving Section*—MM. FRAPPA, ROBERT-FLEURY, LALANNE, HUMBERT, BENJAMIN CONSTANT, RENOUF, H. LEROUX, LANSYER, R. DE GATINE, QUOST, LAVIEILLE, DUTSCHOLD, PÂRIS, VALLOIS, SAUSAY, BRIELMAN, LUBIN, ISTRA, POLACK, PILLE, COBLENTZ, HEILL, BERTHON, YON, SAINT-PIERRE, POINTELIN, BRACQUEMONT, BEAUVERIE, and BENNER. *Sculpture Section*—MM. BAUJAU, BOISSEAU, CAPPELLARO, DECROIX, DELORME, DELOYE, GUILBERT, JETOT, MARCELIN, MATHURIN MOREAU, OLIVA, TALUET, TRUPHÈME, VAUDÉT, and VEDEL. This committee will take entire charge of all the affairs of the Society during the coming year, including the organisation of next Salon.









HAWKHURST CHURCH.

INK PHOTO

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1882.

PROPOSED · COLLEGE · PALACE · LECTURE · HALLS · & SHOPS · BURGESS · HILL · SUSSEX ·

ARTHUR · LOADER · ARCHT ·







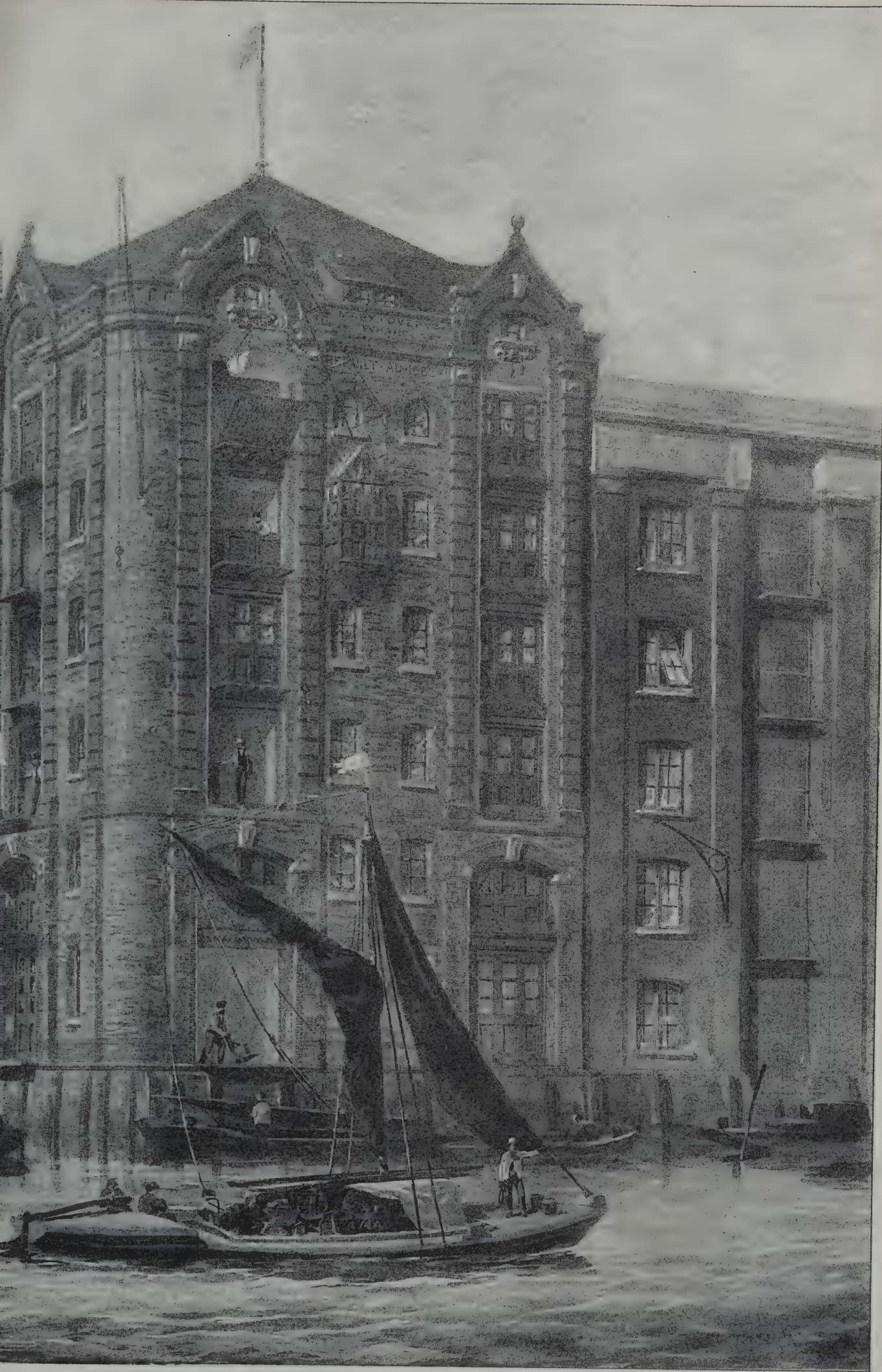


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ST. MARY OVERY'S

GEORGE A. DUNN





F. SOUTHWARK.

A. ARCHITECT.









WAREHOUSE, SOUTH SHIELDS; HENRY CRIEVES, ARCHT.









NEW BAPTIST CHAPEL, BECKENHAM.

HERBERT D. APPLETON, } JOINT ARCHITECTS.  
EDWARD W. MOUNTFORD, }

Springer & Co. 22, Mark Lane, Cannon St. E.C.







## ILLUSTRATIONS.

ST. MARY OVERTY'S WHARF, SOUTHWARK.

THIS block of buildings is now in course of being rebuilt for Mr. GEORGE DOO on a portion of the site of the old palace of the Bishops of WINCHESTER.

The foundations are very massive, and the bottoms of the trenches are of an average depth of 25 feet below Trinity high-water mark. In the course of the excavations several relics were found, among others a seal having on the obverse a figure of Virgin and Child seated on the bank of the river, and a Greek inscription, which has not yet been satisfactorily deciphered.

The fronts are being faced with Shrewsbury paviors, relieved with rusticated pilasters of red bricks, and red and blue brick arches are turned over all openings. The cornice, perforated parapet, and copings of gables will be executed in red terracotta from Messrs. H. DOULTON'S factory, Lambeth.

Mr. S. CHAFEN, of Albion Road, Rotherhithe, is the general contractor, and Mr. HOWARTH foreman.

The architect is Mr. GEORGE A. DUNNAGE, A.R.I.B.A., of No. 5 John Street, Adelphi.

NEW BAPTIST CHAPEL AT BECKENHAM, KENT, FOR THE LONDON BAPTIST ASSOCIATION.

THIS building, the foundation-stone of which is to be laid on November 28, is now being erected from the designs and under the superintendence of Mr. C. W. MOUNTFORD, A.R.I.B.A., of 22 Buckingham Street, Strand, W.C., and Mr. H. D. APPLETON, A.R.I.B.A., of 264 Wool Exchange, Coleman Street, E.C., who were appointed joint architects after a limited competition, their design having been recommended for acceptance by the professional referee, Mr. JAMES CUBITT, of Broad Street Buildings, E.C.

Upon plan the building consists of wide nave with narrow side-aisles, tower, transepts, and chancel—the latter containing the baptistery and choir. The seats are so arranged that the whole of the congregation may have an unimpeded view of the officiating minister, none being placed in the side-aisles, which merely serve as passages to those in the nave.

The height of the nave from floor to ceiling is 36 feet.

Adjoining the chapel there is intended to be a lecture-hall, together with numerous class-rooms for the Sunday school, vestries for minister and deacons, retiring-rooms, kitchen, &c.; but this part of the building, which is estimated to cost about 2,000*l.*, is not to be commenced at present, temporary vestries being provided, while a portion of the nave is screened off to form a Sunday school.

The walls externally and internally are to be of brick, finished with a struck joint, Doultling stone being used for the dressings throughout.

The roofs will be boarded internally, the timbers being stained and varnished and covered externally with Broseley tiles. The flèche on tower is to be covered with oak shingles, and the extreme height from ground to summit of finish will be 100 feet.

The present contract amounts to 3,420*l.*, which includes lighting and heating (by hot water); and considering the substantial nature of the work, this chapel may be considered a decidedly cheap one, as, when the galleries are added, accommodation will be provided for over 800 people at a cost of about 3,700*l.*, or 4*l.* 10*s.* per sitting, including tower.

The builders are Messrs. W. KING & SON, of 3 Vauxhall Bridge Road, S.W.

COFFEE PALACE AND PUBLIC HALL, BURGESS HILL, SUSSEX.

THE erection of this block of buildings is shortly to be proceeded with. The site is an admirable one on the main road, and not far from the railway station on the London and Brighton line, being at the corner of Church Road and Mill Road.

The materials of construction will be, externally, the local red kiln bricks and ornamental tiles, the internal arrangements being made as complete as possible for the purposes intended. Besides the income derivable from the actual business, it is intended to create a revenue from the shops, &c., on either side, as well as from letting the large hall. It will be started by ardent friends of the temperance cause, and formed into a limited company. The architect is Mr. ARTHUR LOADER, 54 Old Steine, Brighton.

WAREHOUSE, SOUTH SHIELDS.

THIS building is now being erected in Queen Street for Mr. R. NESS, of Farning Slade. Mr. R. B. CROSBIE is the builder, and Mr. H. GRIEVES the architect.

HAWKHURST CHURCH.

THE village of Hawkhurst is about five miles from Cranbrook, in Kent. The large sandstone church is picturesquely situated in a decidedly picturesque village. The chancel, generally speaking, is Decorated, and in treatment reminds one of the delightfully-complete and beautiful old church at Etchingham, about four miles distant. The whole of the other part of the church is Perpendicular. There are north and south porches, each with a parvise chamber, some excellent tiles, and at one time the east window was very rich in stained glass. The Abbot of Battle, who had extensive property in the neighbourhood as lord of the manor, erected the first church here in the reign of RICHARD I. Hawkhurst was noted, in common with Lamberhurst, in the early days of the iron trade, for its furnaces, which were started and worked by WILLIAM PENN, the Quaker, and, like all other villages in the neighbourhood, had for great part of the last century a bad pre-eminence as the resort of smugglers and "water-thieves." "I found a paper t'other day," wrote WALPOLE in 1750 to MONTAGUE, who had an estate near Hawkhurst, "with a list of outlawed smugglers. They were JOHN PRICE, *alias* Miss MARJORAM, BOB PLUNDER, BRICKLAYER TOM, and ROBIN CURSEMOTHER, all of Hawkhurst in Kent."

EDWIN G. HARDY.

## ITALIAN ART EXHIBITION AT GLASGOW.

FOR several months past, says the *Glasgow Herald*, a sub-committee of the Museum and Galleries Committee of the Town Council have been quietly but energetically at work organising the Exhibition of Italian Decorative Art, which, with the sanction of the Council, is to be held in the Corporation Galleries during the present winter. The results of the similar exhibition of Oriental Art held last winter have greatly encouraged the committee in their exertions; for though that exhibition was not of a kind which powerfully appealed to the masses, yet it presented a rich field of study to the art student and the professional designer, and by these classes it was thoroughly appreciated and used with most gratifying results, while all persons of educated taste spoke of it only in terms of the highest praise. The committee have found the task of preparing and collecting works of art for the Italian exhibition much more arduous than was the case in dealing with preparations for the Oriental collections. They have resolved to seek only works of real artistic merit, and these, as far as possible, authenticated by coming through the hands of well-known collectors, and their aim is to make the Exhibition remarkable more for unexceptionable quality than for an overpoweringly large collection of objects, good, mediocre, and bad. The consequence is that the objects sought are far from numerous; they are dispersed throughout the whole country, and being generally of great market value, they are treasured by their owners, who do not care to subject them to the necessary risks of packing, railway carriage, and other possibilities of injury inseparable from lending. Nevertheless, the committee have obtained such promises of assistance as will certainly secure an Exhibition of even greater artistic interest and of a more generally popular character than that which was brought together last winter. Several months ago the Lord Provost addressed an application for loans to her Majesty, which was graciously and promptly responded to. The loans which are to be received from the royal collections are not yet finally determined upon; but the committee are hopeful her Majesty may be graciously pleased to select, among other objects, the Cellini Shield at Windsor, one of the greatest triumphs of art metal-work in the world. Whatever the contributions may be, there is no doubt they will be worthy of their royal source and command the attention of her Majesty's loyal subjects in the West of Scotland. As on the last occasion, the nucleus of the collection will be supplied by the Science and Art Department, and while both Lord Spencer and Mr. Mundella have expressed the most lively interest in the undertaking, Sir P. Cunliffe Owen and the officers at South Kensington Museum have with more than goodwill set about carrying out the instructions issued to them. The South Kensington collections will embrace some of the finest and most typical examples of Italian art in the Museum, which can be removed with safety and sufficient convenience, and will illustrate all the leading art manufactures of which Italy was in the Middle Ages the original home and source. In the South Kensington loan will be included a number of exquisite water-colour copies of the greatest Italian pictures, prepared specially for the Duchess of Edinburgh, and graciously lent by her Royal Highness. From the Prime



Minister there will be received three cases of ivory carvings and enamelled jewellery contributed from the collections accumulated in the leisure moments of his busy life; and these, we may assume, will attract popular attention not the less on account of the source whence they come. Probably the most important contribution, from a strictly artistic point of view, which the committee have obtained, is that made by Mr. John Malcolm of Poltalloch, from his famous collection of drawings by the great Italian masters. As is well known, Mr. Malcolm has, with a cultivated taste which is like an instinct, and with a rare amount of knowledge, devoted himself to the acquisition of a collection of drawings by the old masters, the leading features of which, after excellence of condition and artistic preciousness, are undoubted authenticity and greatness of source. Fifty of these drawings have been selected by Mr. Malcolm to be contributed to the Exhibition, embracing works by Sandro Botticelli, Leonardo da Vinci, Michael Angelo, Raphael, Titian, and nearly every other name great in Italian art. The value of such drawings to art students does not need to be pointed out; but even in a popular sense it is not too much to say that an ordinary observer will feel a nearer approach to the personality of these mighty names by a study of their drawings than they could obtain by any other means. Other loans from Mr. J. C. Robinson, the Duke of Buccleuch, the Marquis of Bute, the Marquis of Lothian, and many others, will in their way be not less important.

### DECORATIVE ART.

THE fourth of Mr. J. H. Chamberlain's course of lectures on "Decorative Art, Ornament, and Design," was delivered in the new Lecture Theatre at the Midland Institute on Tuesday evening. The lecturer said that for a good many years a considerable amount of advice had been offered to art students, upon such occasions as the laying of the foundation-stone of a new art school, by persons often not thoroughly acquainted with the business in hand. There was a strong family likeness in most of those addresses, and they generally had for their burden the necessity of producing design. Design, it was said, was wanted; we were in competition with the foreigner, our trade was likely to suffer if they did not produce this needed article; and why did not they do it? Such advice was a little unreasonable. It seemed to assume that art was governed by some species of deity who had gone to sleep, and, like a deity of old time, required a good deal of shouting in order to awaken him. It was assumed that it was within their power to become designers, and to turn out as many new kinds of design as the manufacturer or factor called for. Those who gave this advice forgot that two things were necessary. The first requisite was that they must have the faculty when they were born, for a designer was as much born to do that particular work as a musician was born to do his; and the second was that in their little designing shop they must have some little stock-in-trade. As regarded the latter necessity, it would be his endeavour not to give them receipts for designing, but to show them what they must know and what they must do before they could make those designs which the world generally seemed agreed were so much wanted. He was compelled to take them back to a word with which he was afraid he was beginning to tire them—"admiration." They had got to do it, or they had better give up the business, and they had got to admire as intensely as they possibly could. All practical art that appealed to others could only come out of intensity of feeling on the part of the artist. If they did not care very much about what they did they might depend upon it that other people would care less. No one in the world could quite tell all he knew and all he felt, and whatever the intensity of their admiration might be, that which they endeavoured to impart to others would be in some degree feeble compared with that which they themselves felt. One of the first and best duties which schools of art or Kyrle societies could take up was to learn to admire. How was it to be done? They had classes almost for everything, and an admiration class would not be so absurd as some persons might at first think. It was possible for them to take some familiar objects from nature, and to point out what it was in them which was worthy of attention and admiration. They wanted to get art into the same state as literature was at the present time. What would they think, for instance, of a book if it was simply a revival of old ideas that the world was familiar with two or three thousand years ago, without the admixture of much idea that was new or bearing upon the wishes and wants of the present day; and if, in the second place, the ideas were conveyed in the old-world phraseology? This, however, was what was done to a large extent in the domain of art. By the misuse of examples, and even of museums, the student's memory or brain was stored with art phrases; but they were old-world phrases, and he was asked to make them into an art essay. They did not set out to make a book without having something to say, and it was as essential in art that they should not sit down to make a design for a tile or anything else without having something to say. Admiration, he thought, might be taught; and he thought they might be a little cheered when they called to mind that during the last few years admiration had grown to such proportions that it had become a

subject of ridicule. As soon as they found that men were laughing at a cause they might be sure that the public interest was awakened in it, and that the cause was growing. There were people who thought it was wonderfully droll that there were other people who admired lilies and sunflowers too much. Perhaps it was; but, on the other hand, it was much more droll, or rather much more sad, that if there were a few people who admired lilies and sunflowers too much, there were thousands and thousands of others who admired them far too little. Admiration being necessary, let them have it, if they could, at first hand. Second-hand admiration was better than none; but a great deal of their admiration was third and fourth hand, resulting from their copying copies instead of going to the original source—namely, interest in humanity and the works of Nature. They could not, of course, despise the use of examples. At the present time the Town Council of Birmingham was engaged in forming a museum, which he hoped would be of great use. It would have a twofold use. He had no doubt it would show them in the first place what they all needed to remember—that art belonged to no particular clime or country, but was the heritage of all; and, in the second place, if they examined the various works rightly, it would show them the various methods in which nature after nature and people after people managed to put into their work the admiration which they felt for the world in which they lived. Dwelling upon nature as the great source of inspiration, the lecturer spoke of and illustrated the forms of beauty which were to be found in the grass of the wayside, and even upon the counter of any greengrocer's shop. The Greek volute was nothing to the beautiful form of the "curly-green." He then went on to show that true art never interfered with utility, and that it frequently happened that when perfection of utility was sought after it led to a refinement but one step removed from art. Illustrations of this were to be found in the beautiful lines of sailing boats, of the violin, and sometimes of carriages. In nature use and beauty were always inseparable, but in human work they could too frequently be divided. He urged the need of understanding the nature of the work they had to make or to do, the best material to use, and the best treatment to give that material. In conclusion, he described at length the reasons of utility which led to the beautiful form of the Doric column in the architecture of the Parthenon.

### HYDRAULIC MEASUREMENTS.

AT the first meeting of the session 1882-83 of the Institution of Civil Engineers, held on Tuesday, November 14—the President, Sir W. G. Armstrong, C.B., F.R.S., in the chair—the paper read was on "Recent Hydraulic Experiments," by Major Allan Cunningham, R.E., Honorary Fellow of King's College, London.

This paper was mainly a general account of some extensive experiments on the flow of water in the Ganges Canal, lasting over four years (1874-79). Their principal object was to find a good mode of discharge-measurement for large canals, and to test existing formulæ. There were about 50,000 velocity and 600 surface-slope measurements, besides many special experiments. The Ganges Canal, from its great size, from the variety of its branches abounding in long straight reaches, and from the power of control over the water in it, was eminently suited for such experiments. An important feature was the great range of conditions, and therefore also of results obtained. Thus the chief work was done at thirteen sites in brickwork and in earth, some being rectangular and others trapezoidal, and varying from 193 to 13 feet in breadth, and from 11 feet to 8 inches in depth, with surface-slopes from 480 to 24 per million, velocities from 7.7 feet to 0.6 foot per second, and discharges from 7,364 to 114 cubic feet per second.

For all systematic velocity measurements floats were exclusively used—viz., surface floats, double floats, and loaded rods. Their advantages and disadvantages had been fully discussed in the detailed treatise, "Roorkee Hydraulic Experiments" (1881). They measured only "forward velocity," the practically useful part of the actual velocity. The motion of water, even when tranquil to the eye, was found to be technically "unsteady"; it was inferred that there is no definite velocity at any point; and that the velocity varies everywhere largely, both in direction and in magnitude. The average of (say) fifty forward velocity measurements at any one point was pretty constant, so that there must be probably average steady motion. Hence average forward velocity measurements would be the only ones of much practical use. To obtain these would be tedious and costly; and special arrangements would be required to obviate the effects of a change in the state of water which often occurred in a long experiment, as when velocities at many points were wanted.

As to surface-slope, its measurement (from nearly six hundred trials) was found to be such a delicate operation that the result would be of doubtful utility. This would affect the application of all formulæ into which it entered. The water-surface was ascertained, on the average of its oscillations, to be sensibly level across, not convex, as supposed by some writers. There were 565 sets of vertical velocity-measurements, combined into 46 series. The 46 average curves were all very flat and convex down-stream



(except near an irregular bank), and were approximately parabolas with horizontal axes; the data determined the parameters only very roughly. The maximum velocity line was usually below the surface, and sank in a rectangular channel, from the centre outwards down to about mid-depth near the banks. Its depression seemed not to depend on the depth, slope, velocity, or wind; probably the air itself, being a continuous source of surface-retardation, would permanently depress the maximum velocity, whilst wind failed to effect this owing to its short duration. On any vertical the mid-depth velocity was greater than the mean, and the bed-velocity was the least. The details showed that the mid-depth velocity was nearly as variable from instant to instant as any other, instead of being nearly constant as suggested, by the Mississippi experimenters.

The measurement of the mean velocity past a vertical was thought to be of fundamental importance. Loaded roads seemed by far the best for both accuracy and convenience in depths under 15 feet. They should be immersed only  $\frac{1}{4}$  of the full depth. The chief objection to their use, that (from not dipping into the slack water near the bed), they moved too quickly, was thus for the first time removed. A double-float, with two similar sub-floats at depths of  $\frac{1}{2}$  and  $\frac{3}{4}$  of the full depth, would also give this mean with more accuracy and convenience than any instrument of its class: this instrument is new. Measurement of the velocity at  $\frac{1}{2}$ -depth would also afford a fair approximation.

One hundred and fourteen average transverse velocity curves were prepared from seven hundred and fourteen separate curves. These average curves were all very flat, and were convex down stream (over a level or concave bed), and nearly symmetric in a symmetric section. The velocity was greatest near the centre, of deepest channel, decreased very slowly at first towards both banks, more rapidly with approach to the banks or with shallowing of the depth, very rapidly close to the banks, and was very small at the edges, possibly zero. The figure of the curve was found to be determined by the figure of the bed, a convexity in the bed producing a concavity in the curve and *vice versa*, and more markedly in shallow than in deep water. Curves on the same transversal, at the same site, and with similar conditions, but differing in general velocity, were nearly parallel projections. At the edges there was a strong transverse surface-flow from the edge towards mid-channel, decreasing rapidly with distance from the edge. The discussion showed that it was almost hopeless to seek the geometric figure of the curves from mere experiment.

Five hundred and eighty-one cubic feet discharges were measured under very varied conditions. The process adopted contained three steps: (1) Sounding along about fifteen float-courses, scattered across the site in eight cross-sections; time, say four hours. (2) Measurement of the mean velocities through the full depths in those float-courses, each thrice repeated; time, say four hours. (3) Computation, say two hours. This process was direct and wholly experimental; each step was done in a time which gave some chance of a constant state of water. From an extended comparison of all results under similar conditions, it appeared that the above process yielded, under favourable circumstances, results not likely to differ more than 5 per cent. The sequel showed that in a channel with variable regimen, a discharge-table for a given site must be of at least double-entry, as dependent on the local gauge-reading, and on the velocity or surface-slope.

Special attention was paid to rapid approximations to mean sectional velocity. The mean velocity past the central vertical, the central surface-velocity, and Chézy's quasi-velocity (*i.e.*  $100\sqrt{RS}$ , where  $R$  = the hydraulic mean depth, and  $S$  = the surface-slope) were tried in detail; thus 100, 76, and 83 average values thereof respectively were taken from 581, 313, and 363 detail values. The ratios of these three velocities to the mean velocity were taken out, and compared in detail with Bazin's and Kutter's co-efficients. Other formulæ were contrasted also in slight detail. Kutter's alone seemed to be of general applicability; when the surface-slope measurement is good, and the rugosity-co-efficient known for the site (both doubtful matters), it would probably give results within  $7\frac{1}{2}$  per cent. of error. Improvement in formula could at present be obtained only by increased complexity, and the tentative research would be excessively laborious. Now, the first two ratios varied far less than the third: thus their use would probably involve less error than the third, or approximation would be more likely from direct velocity-measurement than from any use of surface-slope. The connection between velocities was probably a closer one than between velocity and slope; the former being perhaps only a geometric, and the latter a physical one. The mean velocity past the central vertical was recommended for use, as not being affected by wind; the reduction co-efficient could at present only be found by special experiment for each site.

Three current-meters were tried for some time with a special lift, contrived to grip the meter firmly parallel to the current-axis, so as to register only forward velocity, and with a nearly rigid gearing-wire. No useful general results were obtained. Ninety specimens of silt were collected, but no connection could be traced between silt and velocity; it seemed that the silt at any point varied greatly from instant to instant, and that the quantity depended not on the mean velocity, but probably on the silt in the supply-water.

Forty measurements of the evaporation from the canal-surface were made in a floating pan during twenty-five months. The average daily evaporation was only about  $\frac{1}{10}$ -inch. The smallness of this result seemed to be due to the coldness of the water (only  $63^{\circ}$  in May, with  $165^{\circ}$  in the sun and  $105^{\circ}$  in shade).

Lastly, it must suffice to say that great care was taken to insure accuracy in both field work and computation.

## THE LATE MR. E. B. STEPHENS, A.R.A.

ON the 10th inst. Mr. E. Bowring Stephens, A.R.A., died at his residence in Buckingham Palace Road. He was born at Exeter in December 1815. Having at an early age shown a taste for art, he was sent to London in the Midsummer of 1835, and placed as a pupil with Mr. E. H. Bailey, R.A., the sculptor. In the following year he was admitted a student of the Royal Academy, and there made such progress in the art that in 1837 he won the silver medal of the Society of Arts for a small original model of *Ajax Defying the Gods*. A few months later he executed his first commission, for Mr. Thomas Sheffield, of Exeter, a gentleman-who was much interested in everything connected with art—a bust of his daughter Blanche. His first appearance at the Royal Academy was in 1838, when he exhibited a statue of *Diana*, in the manner of his master, Bailey. In the early part of 1839 Mr. Stephens went to Italy, and while there visited all the art galleries from Venice to Naples, and worked principally at Rome, in a studio formerly occupied by John Gibson, in the Palazzo Cecaglia. On his return to England, after an absence of nearly three years, he lived for about a year at Exeter, and while there obtained a commission from Sir John Yarde Buller, M.P., for a life-size statue in marble of Lord Rolle. In 1842 he took up his permanent residence in London, and in the following year obtained the gold medal at the Royal Academy for a small relief subject, *The Battle of the Centaurs and Lapithæ*. He also executed marble busts of the late Earl of Devon, Lady Courtenay, Sir W. W. Follett, and the Dean of Exeter. In 1845 he assisted in ornamenting, in conjunction with other artists, her Majesty's summer pavilion at Buckingham Palace; and in the same year he executed marble busts of Bishop Philpotts, General Gage Hall, and Colonel Fulford. In several subsequent years he added largely to his previous productions, and to the Great Exhibition of 1851 his contributions were a colossal group of *Satan Vanquished* and *Satan Tempting Eve*. He also exhibited, among others, a marble bust of Lord Palmerston, which was presented to Viscountess Palmerston by the electors of Tiverton. In 1858 he produced a posthumous marble bust of the Hon. W. Reginald Courtenay, and busts of Viscount Ebrington and Earl Fortescue; and in the following year his most successful works included the bronze bas-relief of Balacava to the memorial to Colonel Morris on Hatherleigh Down. In 1861 he completed a colossal statue in marble, on Northernhay, Exeter, to the honour of his friend and patron, Sir T. D. Acland. There had at one time been much discussion whether this statue should not have been publicly competed for, in order that the city should be enriched by the best work of art procurable in the country; but when the figure was unveiled there was general satisfaction. In 1863 his work consisted of a colossal statue of the late Earl Fortescue, erected in the Castle Yard, Exeter; a statue of *Alfred the Great*, placed in the Egyptian Hall, Mansion House, London; and a marble statue of the Earl of Lonsdale, placed in Lowther Castle. Mr. Stephens was, in 1866, elected an Associate of the Royal Academy, and it was generally supposed that his success was due to his being confounded with the late Alfred Stevens, the sculptor of the Wellington Memorial. He completed a bronze statue of the Duke of Bedford at Tavistock, and in the following year a sitting statue in marble of John Dinham, erected in Northernhay, Exeter. In 1869 he received a commission to execute a recumbent monumental figure of Elizabeth, Countess of Devon, which is now placed on a Gothic altar tomb in Powderham Church. Mr. Stephens produced many other very successful works which added greatly to his reputation as a sculptor. He received a commission for a life-size statue of the late Mr. Alfred Rooker, to be placed in the Guildhall Square, Plymouth. It was a difficult task, as he had no previous knowledge whatever of the gentleman whose features he was called on to produce; but he entered into the work with ardour, and succeeded in producing an admittedly excellent likeness. "It would," said one of the speakers at the ceremony of unveiling the statue in September 1878, "test the skill of most men to execute the likeness of any one well known to them, in whose personal presence they had often been, and had studied their living features with that expression which guaranteed truth of likeness. But in the present case we are reminded of the prophet of old, who had not only to interpret the dream, but to recall all the details of the forgotten mystery. In the same way our sculptor had to collect from very fragmentary sources the true likeness, the particular expression of the original whom he had never set eyes upon; but all will admit how well and nobly he has executed the work." The *Deerstalker* group, which now occupies a prominent position on Northernhay, Exeter, was also the work of Mr. Stephens, and is regarded as his *chef-d'œuvre*. He also modelled, the bust of Mr. C. C. Whiteford, the late town-clerk of Plymouth



which now stands in the Plymouth Council Chamber; and one of his latest works was the statue of the Earl of Devon in Bedford Circus, Exeter. Mr. Stephens was not a great sculptor, but he "nearly touched the top of mediocrity," and he possessed so many friends in the Royal Academy that for several years he secured second place in the elections for Academicians.

### THE SUNDERLAND "PETRARCH."

AT the sale of the Sunderland Library on Saturday there were no less than seventy-one editions of Petrarch offered, three of which were printed on vellum, one being the first edition of 1470 by Vindelin de Spira, of which probably there are not two perfect copies in existence, this having lost two leaves; another was the first Aldine of 1501; and the third a small, very thick 8vo., Venice, 1558. Important as these were, they sank into insignificance before the folio of 1488, printed at Venice on paper, which was rendered unique by containing a set of six old copper-plate engravings of the Triumphs, besides the woodcuts. Very little notice had previously been taken of this book, which has now become famous for those extraordinarily fine engravings by some great unknown Italian master of the time, and has enhanced the renown of the Sunderland Library by bringing the enormous price of 1,950*l.*, the highest sum in the sale, and one of the highest ever paid at auction for any book. It appears to have lain hidden away among the Petrarchs in the vast mine of rare books so long unworked in Blenheim Palace, and the discovery of the rare treasure at the moment of the sale came as a complete surprise. It had not wholly escaped the observation of the very able cataloguer, as the engravings were specially referred to; but the real value of the book had only been discovered by such keen experts as Mr. Quaritch, Mr. Thibaudeau, and Mr. Ellis, who had naturally each kept his own counsel. That they had not neglected to refer to Bartsch about the engravings was soon evident when the book (lot 9,545)—"I Triumphi col commento di B. Glicino; e Sonetti e Canzone col commento di Fr. Philelfo, fol. in Venetia, per Bernadino da Novara, 1488," described as "a valuable and interesting edition on account of the engravings," leaf 5 supplied in MS.—was put up, after several fine copies had been sold at considerable sums, at a commonplace bid of 1*l.*, followed immediately by one of 100*l.* from Mr. Ellis, and another of the same amount from Mr. Thibaudeau, who continued advancing quickly to 1,000*l.* by bids of 100*l.*, calmly watched by Mr. Quaritch, who then joined issue, till, at 1,600*l.*, Mr. Ellis retired, leaving the field to Mr. Quaritch and Mr. Thibaudeau, who continued it amid the greatest excitement up to 5*l.*, beyond which there was no advance, and Mr. Quaritch carried off his prize. The whole affair was over in about five minutes, and was one of the sharpest and most determined fights ever witnessed at a book sale. Mr. Quaritch, on being congratulated upon his victory, was so enthusiastic as to declare that neither the Paris Bibliothèque nor the Berlin Government should have the opportunity of purchasing until the book had been offered to the Royal Library and to the British Museum. These most interesting engravings and this copy of Petrarch are mentioned by Bartsch, but erroneously, as three only, and by Nicoletto of Modena. Probably neither the book nor the engravings had been seen by Bartsch, but the Abbé Lani appears to have seen it, and correctly describes the set of six engravings, which he considered to be quite unique and the work of some early engraver after the designs of Philippino Lippi. Passavant also refers to them as resembling the style and work of Philippino, but whether this identical copy is the one referred to by these writers is the point of interest which will now be so much discussed. The book itself is of comparatively small value. It is a folio measuring about 12 by 8, bound in calf, in what is called Cambridge binding, no doubt after the Earl of Sunderland became possessed of it. The engravings are on paper the same size as the book, with a full margin of an inch and a half, and in perfect condition, being evidently early impressions issued with the book in 1488. They are printed in the fine grey ink which denotes the genuine untouched plate, as seen in the rare engravings attributed to Botticelli in the Althorpe Dante and in the Dante of 1481 to Baccio Baldini, after the designs of Botticelli, sold in this sale in April last for 35*l.* They are placed next to the leaves with the ornamental bordered woodcuts, and represent each of the Triumphs—Time, Fame, Divinity, Love, Chastity, Death. Each is a composition of many figures, and many of the heads certainly resemble those seen in the pictures of Filippino, with a strong resemblance also to Botticelli, though the work is much more elaborate than any engraving by his hand. The drawing throughout shows a master hand, and many of the female draped figures are full of beauty in the heads and the graceful attitudes, particularly in the *Chastity*, in which beautiful girls dance round the car on which is the figure of Chastity holding a pen in one hand and book in the other, with a nude female, blindfolded, kneeling before her. It will be remembered that Baccio Baldini also engraved the six Triumphs (Bartsch, 13), a set of which was brought together in the Art Treasures Exhibition at Manchester, 1857, from the Wellesley and other cabinets; but Baccio is said to have died in 1480, eight years before this book was printed.

### ELECTRIC LIGHTING.

THE opening meeting of the winter session of the Society of Arts was held on Wednesday, when an address by Dr. Siemens, the chairman of the Council, was delivered upon the present condition and future prospects of electric lighting. After describing the difficulties which had stood in the way of the practical introduction of the light, he considered the recent legislation on the subject. Dr. Siemens spoke favourably of the Electric Lighting Act passed last year, and seemed to think that the complaints now appearing in the papers, that municipalities refuse their assent to applications by electric light companies for provisional orders, were often not well founded. The authorities would clearly be justified in refusing any application of a speculative character, and no licences or provisional orders should be granted unless the applicants could give assurance of being able and willing to carry out the proposed work within a reasonable time. The technical questions involved are hardly yet sufficiently understood to admit of immediate operations upon a large scale. The area that each lighting district should comprise varied according to the opinion of different witnesses before the recent Parliamentary Committee, from Dr. Siemens' own estimate of a quarter of a mile to estimates suggested by others of as much as four square miles. In the case of gas, considering the unpleasant nature of the manufacture, it was necessary that the supply should range over a large area; in the case of electricity this did not apply, and for many reasons it might be desirable to limit the size of each district to that above-mentioned—a quarter of a square mile. Such is about the area of the parish of St. James's; and Dr. Siemens then proceeded to sketch out in some detail the arrangements which would be required for supplying this parish with a sufficient amount of the electric light. The number of incandescent lights required for a house of moderate dimensions might be taken as 100, the lights being from 15 to 18 candle-power each. This is in effect the number of Swan lights employed by Sir William Thomson in lighting his house in Glasgow. Eleven horse-power would be required to excite this number of incandescent lights, and at this rate the parish of St. James's would require 3,018 multiplied by 11, or 32,200 horse-power to work it. It might be fairly objected, however, that there are many houses in the parish much below the standard here referred to; but, on the other hand, there are 600 shops, involving larger requirements. Nor does this estimate provide for the large consumption of electric energy that would take place in lighting the eleven churches, eighteen clubhouses, nine concert halls, three theatres, besides numerous hotels, restaurants, and lecture halls. A theatre of moderate dimensions, such as the Savoy Theatre, has been proved by experience to require 1,200 incandescent lights, representing an expenditure of 133 horse-power; and about one-half that power would have to be set aside for each of the other public buildings here mentioned, constituting an aggregate of nearly 2,926 horse-power. Again, this general estimate did not comprise street lighting, and to light the 6½ miles of principal streets of the parish with electric light would require, per mile, 35 arc-lights of 350 candle-power each. This, taken at the rate of 0.8 horse-power per light, represented a further requirement of 182 horse-power, making a total of 3,108 horse-power, for purposes independent of house lighting, being equivalent to 1 horse-power per inhabited house, and bringing the total requirements up to 109 lights, equal to 12 horse-power per house. Dr. Siemens, however, could not agree with those who expect that gas lighting will be entirely superseded; on the contrary, he maintained that the electric light, while possessing great and peculiar advantages for lighting our principal rooms, halls, warehouses, &c., owing to its brilliancy, and more particularly to its non-interference with the healthful condition of the atmosphere, would leave ample room for the development of gas. Assuming, therefore, that the bulk of domestic lighting remains to the gas companies, and that the electric light is introduced into private houses only, at the rate of (say) twelve incandescent lights per house, the parish of St. James's would have to be provided with electric energy sufficient to work (9+12) 3,018, equal to 63,378 lights, equal to 7,042 horse-power effective; this is equal to about one-fourth the total lighting power required, taking into account that the total number of lights that have to be provided for a house are not all used at one and the same time. No allowance is made in this estimate for the transmission of power, which, in course of time, will form a very large application of electric energy; but considering that power will be required mostly in the daytime, when light is not needed, a material increase in the plant will not be necessary for that purpose. As a position for the engines and machines, Dr. Siemens suggested Golden Square. If the unoccupied area of the square were excavated and arched over to the present level, sufficient space would be provided. The cost of these works, including engine power and machines, might be estimated at 140,000*l.*, not including the conductors, &c. The size of the conductor is a most important consideration. Two things have to be considered—first, the charge for interest on the original cost and depreciation, and secondly, the cost of the electrical energy lost by resistance. The sum of these two, as has been pointed out by Sir William Thomson, is least when the two



components are equal, and thus we obtain the principle on which the size of the conductors should be calculated. Working on this principle, Dr. Siemens calculated that the proper size of conductor for the installation he is describing would be a rod of 8 inches diameter. If the mean distance of the lamps from the station be assumed as 350 yards, the weight of copper used in the complete system of conductors would be nearly 168 tons, and its cost 15,120*l*. To this must be added the cost of iron pipes for carrying the conductors underground, and of testing-boxes, and labour in placing them. Four pipes, of 10-inch diameter each, would have to proceed in different directions from the central station, each containing 16 separate conductors of 1-inch diameter, and separately insulated, each of them supplying a sub-district of 1,000 lights. The total cost of establishing these conductors may be taken at 37,000*l*., which brings up the total expenditure for central station and leads to 177,000*l*. It was assumed that the conductors would be placed underground, it being quite inadmissible, both as regards permanency and public safety and convenience, to place them above ground, within the precincts of towns. With this expenditure the parish of St. James's could be supplied with the electric light to the extent of about 25 per cent. of the total illuminating power required. To provide a larger percentage of electric energy would increase the cost of establishment proportionately, and that of conductor nearly in the square ratio of the increase of the district, unless the loss of energy by resistance were allowed to augment instead. The statement that a conductor of such a size would be required to supply a single parish with electricity might surprise many of the uninitiated who had heard of the suggested transmission of the energy of waterfalls over long distances by electrical means. In answering the question it had to be admitted that the transmission of electric energy of such potential (200 volts) as is admissible in private dwellings would involve conductors of impracticable dimensions, and in order to transmit electrical energy to such distances, it would be necessary to resort, in the first place, to an electric current of high tension. By increasing the tension from 200 to 1,200 volts the conductors might be reduced to one-sixth their area; and if we were content to lose a larger proportion of the energy obtained cheaply from a waterfall, we might effect a still greater reduction. A current of such high potential could not be introduced into houses for lighting purposes, but it could be passed through the coils of a secondary dynamo-machine, to give motion to another primary machine, producing currents of low potential to be distributed for general consumption. Or secondary batteries might be used to effect the conversion of currents of high into those of low potential, whichever means might be found the cheaper in first cost in maintenance and most economical of energy. It might be advisable to have several such relays of energy for great distances, the result of which would be a reduction of the size and cost of conductor at the expense of final effect, and the policy of the electrical engineer would, in such cases, have to be governed by the relative cost of the conductor and of the power at its original source. If secondary batteries should become more permanent in their action than they are at the present time, they might be largely resorted to by consumers, to receive a charge of electrical energy during the daytime or the small hours of the night, when the central engine would be otherwise unemployed. The advantage of resorting to these means would depend upon the relative first cost and the cost of working the secondary battery and the engine respectively. Working out on a similar scale the cost for the whole of London, and considering the amount of light which would be required in the richer and in the poorer districts, Dr. Siemens obtains the sum of 14,000,000*l*., without any allowance for lamps or internal fittings. Going still further afield, he finds that to extend the same system over the towns of Great Britain and Ireland would absorb a capital exceeding 64,000,000*l*., to which would have to be added 16,000,000*l*. for lamps and internal fittings, or a total capital of 80,000,000*l*. Some might live to see this realised, but to find such an amount of capital, and, what was more important, to find the manufacturing appliances to produce work representing this value of machinery and wire, must necessarily be the result of many years of technical development. Dr. Siemens was therefore led to the conclusion that the applications now being made by electric light companies for provisional orders to supply electrical energy, not only to the towns of England, but to those of our colonies and abroad, showed that their ambition was somewhat in excess of their power of performance. Turning then to the working charges of an establishment such as that above described, and assuming the 64,000 lights to be working for six hours a day, with coal at 20*s*. a ton, and the consumption 2 lb. per effective horse-power per hour, this would come to about 18,000*l*. Charges for wages, interest, depreciation, general management, &c., make a grand total annual charge of 41,000*l*., or at the rate of 12*s*. 9½*d*. per incandescent lamp per annum. The cost of renewing lamps brings up the charge for each lamp to 21*s*. 9½*d*. for a year. The cost of burning gas in a good Argand burner, which would produce the same luminous effect, would be 29*s*., so that there is an evident balance of cheapness in favour of electric lighting. On the other hand, the cost of establishing gasworks would not exceed 80,000*l*. as compared with 177,000*l*. for electricity; so that it appears that, while it would be more costly to establish a given supply of

luminous power by electricity than by gas, the former has the advantage as regards current cost of production. These calculations, however, being only based upon the present prices of gas, and not allowing for the large dividends paid by gas companies, cannot be looked upon as representing a permanent state of things. On the other hand, it is probable that electric lighting would be cheapened by resort to a larger extent to arc lights, and also by future improvements in the manufacture of incandescent lamps. Considering the two great sources for public lighting, Dr. Siemens came to the conclusion that the introduction of the electric light, even to the full extent he contemplated, would go hand in hand with an increase in the consumption of gas, and that the consequent competition could not fail to improve the quality and cheapen the supply of both greatly to the advantage of the public. As the light of luxury, electricity must win; but gas will at the same time find an increasing application for the more humble purposes of diffusing light.

### THE SLADE PROFESSORSHIP AT OXFORD.

IT is reported that Mr. Ruskin will be invited to fill again the chair of Fine Arts, lately vacated by Mr. Richmond, and that there is good hope that he will accept the nomination. Mr. Ruskin is so completely identified with the study of this subject at Oxford that it will give general satisfaction should he consent to reassume the Professorship. But it is feared by some of his friends that Mr. Ruskin's health will not allow him to undertake the duties. The following letter from Mr. T. Humphry Ward on the resignation of Mr. Richmond appeared in the *Times* :—

Your announcement that Mr. W. B. Richmond has resigned the Slade Professorship of Fine Art at Oxford will have been received with general regret. Mr. Richmond is so accomplished an artist and critic that it might have been hoped that he would find in the University a thoroughly congenial field of work. Are we to suppose that he has found but a barren soil, and that he has seen the vanity of lecturing to an audience of which not one member in ten has any serious interest in art, and of directing a class of young people who cannot draw?

The truth is that, as far as Oxford is concerned, Mr. Slade's splendid bequest is found to be unworkable. The Slade school in London is a reality; at Oxford it is not, and cannot be. The undergraduates, under the examination system, have no time to learn the practice of art; and yet, as at present constituted, the Professor's work goes on the theory that practical and technical instruction is what is chiefly required. It is to be hoped that the University, laying to heart the lesson of this resignation, will take the opportunity of considering whether the conditions of the Professorship may not be so altered that to hold it may be a lasting satisfaction to the Professor, and that in future, when Oxford has got her Ruskin or her Richmond, she may be able to keep him. The conditions were indeed laid down in outline by Mr. Slade's will, and a recent will is generally a difficult matter to deal with. But I cannot help thinking that a way might be found to make the Professorship really satisfactory both to the University and the holder.

What the University requires is not a practical teacher of drawing, however eminent, but (1) a teacher of the history of art, (2) an efficient curator of the collections in Oxford. At Cambridge they have these two most efficiently combined in the person of Mr. Sidney Colvin, who is at once Slade Professor and keeper of the Fitzwilliam Museum. The result is that while no attempt is made to achieve the impossible task of turning undergraduates into artists, the history of art is dealt with as a fit and proper subject for regular University teaching, and the great collections are properly cared for. Why cannot the same thing be done at Oxford? She cannot, indeed, rival the magnificent possessions of her sister, but yet her collections are of high importance. It is not, however, too much to say that their condition at present is one of complete disorganisation. The Randolph Galleries contain a collection of drawings by Raffaele and Michel Angelo which is famous throughout the world, a large number of Turner's finest water-colours, and a respectable gathering of old pictures. With these are associated the Douce prints, a treasure that is literally unknown, for they are huddled away in paper parcels in drawers where they cannot be got at without great difficulty, and no one has ever taken the trouble to catalogue them. Yet I can say from my own knowledge that these prints are of the highest interest, rarity, and value. Properly arranged and catalogued, they would be studied by amateurs from all countries, but properly arranged and catalogued they will not be until they are placed in proper hands.

There is, besides, the Ashmolean Museum; there is the small Castellani collection, ironically called "educational"; there is the totally unknown Hope collection of engraved portraits hidden away in the upper regions of the Camera. Then there is the superb collection of drawings by Leonardo and others, which belongs to Christ Church, and which now is practically inaccessible. Is it too much to hope that if the University collections were properly organised and brought under one roof, and under the charge of one director, Christ Church might entrust these



treasures to his keeping? The present seems an excellent opportunity for carrying out a much-needed reform. I trust that if the University has to lose Mr. Richmond, it will at least give his successor the power of putting the collections upon a regular and orderly footing, and thus take away what is at present a reproach to Oxford.

### REVIEWS.

A MANUAL OF THE BUILDING REGULATIONS IN FORCE IN THE CITY OF LIVERPOOL. Arranged and Annotated by W. GOLDSTRAW. Liverpool: T. Brakell.

The edition of the local building Acts which has been prepared by the Surveyor of Buildings in Liverpool cannot fail to be appreciated by the architects and builders of that city. It is printed in a convenient form, and contains notes referring to the difficulties which are likely to occur in practice. If a similar book could be prepared for London it would be a vast gain, for those in use are too cumbrous and involved.

TRANSACTIONS OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS. Session 1881-82. Published at the Institute.

The papers read during the last session, although few in number, form with the discussions and memoirs a volume of over two hundred pages. It must be acknowledged that none of the preceding volumes is so skilfully edited as the last. Many things are introduced which help to explain the papers. Among others we find a paper which was read by Mr. Burges in 1876, and one read by the Rev. R. Burgess in 1841; by a curious coincidence both were unprinted until now. The volume is amply illustrated.

LECTURES ON ART, DELIVERED IN SUPPORT OF THE SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS. London: Macmillan & Co.

Whatever may be thought about the prudence of the policy adopted by the Society for the Protection of Ancient Buildings, there can be no disputing the interest of the lectures which were delivered in support of the cause by Messrs. Poole, Richmond, Poynter, Micklethwaite, and Morris. The primary purpose of the lectures was to obtain funds from the auditory to carry on the business of the Society, but they were too valuable to be allowed to exist only in the memories of the people who were present at their delivery. They have been now published at a price which is much below what is usually charged for books equally well written. The volume forms an excellent collection of essays by men who are familiar with the subjects they have treated. When it is said that Mr. Richmond discoursed on "Monumental Painting in Italy from Giotto to Michael Angelo," and Mr. Poynter on "The Latest Discoveries of Ancient Decoration," that Mr. Morris read elaborate essays, in that pure Saxon of which he is a master, on "Pattern Designing and the Lesser Arts of Life," that Mr. Poole, of the British Museum, spoke on "Egyptian Tombs," and Mr. Micklethwaite on "Parish Churches," enough is suggested about the importance of the book.

The lectures of Mr. Richmond and Mr. Poynter might have been delivered in Oxford or South Kensington, for they contain nothing that is suggestive of their origin. But in the others more or less was said about the claims of the Society on the purses of the public. Mr. Micklethwaite asked for aid because the Society supplied "interesting information and sound advice." Mr. Morris grounded his appeal on the fact that it was "the most prudent society in England." Mr. Poole was more ambitious, for he must have adapted to the occasion one of the sermons on behalf of orphans and others which depend for effect on the presence of those whose cause the preacher is advocating. In the Kensington Town Hall Mr. Morris was converted into the interesting object to which all eyes were directed. "Here," exclaimed Mr. Poole, "is one who has wrought for us in the field of art, hard and unceasing work, and who, more than any other living man, has brought this great duty home to our hearts. If we owe him gratitude for having delighted the hearing ear as much as the seeing eye, if we feel that our homes have been made by him more restful to the weary head, more educating to the young intelligence, then" — the speaker need not have finished the sentence, for of course every church-goer knew what was to follow. That Mr. Morris must have winced on hearing all this we have little doubt. It might not have been convenient then to stop such an outburst, but surely the absurd passage could have been cancelled in the printing.

Although all the lecturers agree in advising the present age to have recourse to the past for what is best in art, each man has his pet period which he would have taken as the standard. Mr. Poole thinks that the colours as well as the forms of Egyptian art are the most suggestive of permanence, immortality, and the like. Mr. Poynter believes in the supremacy of the Greeks even in painting, and that in spontaneity of life and vigour "the best Italian painters were children even to those secondary artists whose works remain for us to judge from." He imagines that some of the Greeks combined the richness and colouring of Titian with the light and shade of Rembrandt.

On the other hand, Mr. Morris says that the best Greek art is less expressive than later work, and that as regards painting it would be unreasonable to suppose that the Greeks gave themselves up to indulgence in the refinements of colour. His faith is in pattern-designing, while Mr. Poynter's desire is to see Owen Jones' book, which consists solely of patterns representing various times and peoples, at the bottom of the sea. According to Mr. Richmond the education of young artists should be carried on with the severe examples of the Italian painters in view. He admires the monumental paintings of Italy, in which trivial human emotions have no part, but "the steady march of man's life, the noblest of his feelings, the greatest episodes of his career, the highest hopes of his soul and its immortality, are the points upon which the painter of eternal truths loves to dwell." Mr. Morris is sceptical about the expediency of the subjects, for he says that in such cases "the pictured wall is apt to become a window through which a man quietly at work or resting looks on some great tragedy, some sad memory of the past, or terrible threat for the future. The constant companionship of such deeply emotional representations are too apt to trouble us at first, and at last to make us callous," because they are always claiming our attention, whether we are in a mood to be stirred by them or not." It will be seen from the foregoing that there is no slight difference between the opinions of the lecturers, but as they would all agree in denouncing the efforts of architects—(Mr. Micklethwaite calls them "murdering restorers")—to make churches less dreary to congregations, the supporters of the society will no doubt be satisfied.

BEDFORD PARK. Nine Views in Chromolithography. The Stores: Bedford Park.

It was at one time accepted that a little red went a long way in a landscape painting, and many a man was afraid to introduce the colour unless on a cloak or hat of one of the figures. A few years since it would have been held to be impossible to make a series of landscapes out of a place which consists of houses having red walls and roofs, and where the colour has not been softened by the influence of time. The experiment has, however, been made. The artists commissioned by Mr. Carr to prepare drawings of the property which he founded at Bedford Park may not in the opinion of some critics have succeeded, but the difficulty of the undertaking must be admitted. The drawings have been reproduced in chromolithography in a style that is not suggestive of copying, and they form a handsome set of plates. The drawing of the houses is of the kind that finds favour with landscape painters; form and proportion are sometimes sacrificed to the artist's notions of effect. The most flagrant example of this is in the view in which the Art School appears. The building may not be free from defects, but there is no reason that we can see for representing it in a manner that would serve for a caricature.

In the first plate Mr. Berry represents the Bath Road, and makes the most of the trees, which are unlike those commonly found in suburban gardens. The second plate, by Mr. J. C. Dollman, shows the Avenue; and as both sides appear, with one exception all the houses are merely indicated. Mr. Hargitt, we suppose, was of opinion that even at Bedford Park distance lends enchantment to the view, for he takes his standpoint on the common. All things considered, his drawing is the most successful of the series. The fifth view, of the schools and stores, by Mr. Harrison, in treatment differs from the others, for in the wall of the house in the foreground the courses and pointing of the bricks are shown. The figures are exceptionally clumsy. Mr. Jackson gives a pleasant view of the church and parsonage, in which the garden that extends across the front contrasts well with the buildings. While some of the drawings are pre-Raphaelite in the anxiety to express detail, Mr. Nash boldly sketches Newton Grove with a coarse pen and sepia, and then works-up the sketch with colour lightly laid on. But no other style appears to be so well adapted for the occasion, and if the lithographs are ever used for drawing-copies in the Park, this one will be found to be the most difficult to follow with success. The single cottage which constitutes Mr. Paget's "Queen Anne Gardens" seems to be constructed of bricks of a different colour from those in other houses. The depth of colour is intense, and is laid on in a manner that is the reverse of Mr. Nash's. In Mr. Rooke's view the roof and upper part of the "Tabard" are seen, with the porch of the church beyond, but the space that intervenes has not been successfully rendered. The view is little more than a study of roofs and chimney-pots. The last plate is by Mr. Trautschold, and would delight a Japanese, as branches with apple-blossoms are thrown across the foreground. Tower House and Queen Anne's Grove form the subject, and lawns and trees are skilfully made to balance the mass of red brick houses.

Ripon.—New Wesleyan schools have lately been opened. The total cost of the new buildings has been about 1,000*l*. The buildings comprise new infant schools and classrooms. The contractors for the work were Messrs. Mitchell & Webster, builders, Ripon; Mr. Simpson, joiner work; Mr. Baynes, slater work; Mr. Dalton, plumber work; and Messrs. Appleton & Son, stone-work.



## LEGAL.

**High Court of Justice—Queen's Bench Division.**

Before Justices DENMAN and MANISTY.

LAWSON *v.* WALLACEY LOCAL BOARD.

This action was brought by the plaintiff, a contractor residing in Glasgow, against the Wallacey Local Board for a sum of 2,489*l.* 3*s.* 11*d.*, being the balance of an amount claimed by him for executing a contract of dredging at Seacombe Ferry.

The statement of the case showed that on May 2, 1878, a contract was entered into between Mr. Lawson and the Wallacey Local Board, whereby the plaintiff undertook to remove 10,000 cubic yards of soil from the bed of the River Mersey at Seacombe Ferry, for which he was to be paid 5,000*l.* The work, which was to be executed under the direction of Mr. Carson, the engineer to the Board, was to be completed before October 1, 1878, subject to an extension of time in case a temporary staging then erected on the site of the proposed work in connection with the new ferry at Seacombe should not be removed within such time as should enable the contractor to complete the work by the time mentioned. The contractor was to be paid 80 per cent. of the value of the work done each month, and on the completion of the work he was to be paid the balance of the 5000*l.* due. Any difference which might arise was to be settled by the engineer. On September 9, 1878, the contractor commenced work, and finished on January 9, 1879. He then wrote the engineer claiming the balance. Correspondence passed between the engineer and the contractor, the former alleging that the contract had not been fulfilled, and disputed the plaintiff's mode of measurement. On January 15 plaintiff wrote stating that certain piles erected by Messrs. Brassey for a landing stage at Seacombe Ferry prevented him getting on with the dredging. To this Mr. Carson replied that Messrs. Brassey would be urged to remove the temporary stage, adding that if plaintiff suffered injury he would be compensated. Part of this landing stage was removed in February 1879, but the whole was not removed till September 1879. The plaintiff alleged that he was put to considerable inconvenience and expense for wages and rent of dredger through this delay; and on December 10 he wrote to the engineer, telling him that to get a fair profit on the transaction he would require 10,000*l.*, less what he had already received. This amount was subsequently reduced, the plaintiff deducting everything except damage caused by the delay brought about by the non-removal of the temporary landing stage, and he brought the present action for 2,489*l.* 3*s.* 11*d.*, the sum alleged by him to be due from the Local Board after reducing from the total all sums paid by them on account.

Counsel for plaintiff maintained that the Local Board had been guilty of a breach of contract, for which they must pay damages. The matter was not one which under the agreement it was in the power of the engineer to decide. He submitted that there was no evidence of an agreement on the part of the plaintiff to waive his claim for damages; that there had been a breach of agreement by the Local Board; and there being no independent agreement to refer the matter to the engineer, there would be no award which would be binding on the plaintiff. He urged further that the Local Board were bound by the agreement entered into by their engineer, namely, to compensate Mr. Lawson for delay caused by the landing stage. On these grounds he asked for judgment as to whether there was a cause of action. For the defendants it was argued that the plaintiff had been fully compensated for the delay, as 962*l.* 6*s.* 2*d.* had been awarded him on account of that. The plaintiff had in effect submitted the case to the engineer, and when he found he could not get all he wanted he turned round and refused to admit his right to decide the question. In reply it was contended that there had never been a request to the engineer to arbitrate on the question, and that there had been no intention to arbitrate under the agreement.

Judgment was reserved.

**CHURCH BUILDING AND RESTORATION.**

**Clifford's Mesne.**—The new church of St. Peter has been opened. The church is of local stone, with Bath stone dressings, and will accommodate about 100 persons. The work has been carried out by Mr. Wibby, builder, of Gloucester, the architect being Mr. S. Harris, London.

**Clayton-le-Moors.**—A new Baptist chapel and school were opened for public worship on October 24. The building consists of a chapel to seat 276 adults and a school for 400 scholars, and is so arranged that eventually the whole building will be used as a chapel to seat 714 persons, no structural alterations being required except the taking down of a partition wall and completing the seating of the portion now used as a school. There will then be three vestries at the back. Land has been secured behind the chapel for a detached school to be built when required. The site is enclosed by a stone boundary wall with iron gates and railings, and the building is erected of local stone from the plans and under the superintendence of Mr. George Baines, architect, Accrington. The total cost of the buildings is about 2,400*l.*

**Aspull.**—The church of St. Elizabeth, lately erected, was opened on the 1st. The plan comprises a broad nave and chancel of nearly equal width, the chancel being somewhat higher than the nave. With the exception of a contribution of 1,200*l.* from the late Lord Crawford, the new church has been erected at the sole cost of Mr. Roger Leigh, who has also built schools and intends erecting a parsonage house. The total cost of the church has been about 6,000*l.* The various buildings have been carried out by Mr. W. Winnard, contractor for the church, and Mr. T. Darnbrough for the schools and master's house, &c., under direction of the architects, Messrs. Medland and Henry Taylor, of Manchester.

**Bulwell.**—The foundation-stone of a new church has been laid. It will consist of nave, north and south aisles, apsidal chancel, &c.; the style being Early English Decorated; the building to be of Bulwell stone, with Bath stone dressings. Mr. Knight, of Nottingham, is the architect, and Mr. McCulloch, of Bulwell, the contractor.

**Whiston.**—A contract has been taken for the restoration of Whiston church as a memorial of the late Canon Howard. Mr. J. Oldrid Scott is the architect. Designs have also been prepared for the restoration of the tower.

**Paignton.**—A new Baptist chapel has lately been opened. The building has been erected by Messrs. King & Son, contractors, under the superintendence of Mr. G. Soudon Bridgman, architect, of Torquay and Paignton.

**Sudbury.**—The church of All Saints, Sudbury, has been reopened after the carrying out of works of renovation under the direction of Mr. Fawcett, architect, of Cambridge. The cost has been about 1,000*l.* Among other works the east window has been filled with stained glass, the subject represented being the Ascension.

**Stoke Golding.**—The chancel of the parish church has been reopened after being rebuilt. An old gallery, &c., which blocked up the tower arch and the west end of the aisle have been cleared away and the tower arch restored. The works have been carried out by Messrs. Law & King, of Lutterworth, under the direction of the architect, Mr. W. Bassett Smith, of London.

**Washaway.**—A mission church erected at Washaway, between Bodmin and Wadebridge, Cornwall, has been opened. The architect was Mr. Reeve, London, and the contractors were Messrs. Cleave, Gill & Williams.

**Carnarvon.**—The foundation-stones have been laid of a Presbyterian chapel. The building is thirteenth-century in style, and will with site cost about 3,849*l.* Mr. Richard Owen, of Liverpool, is the architect, and Mr. R. R. Williams, of Carnarvon, the contractor.

**Somersham.**—Service has been resumed in the church of St. Mary. Works of restoration have been carried out by Messrs. J. B. & F. Bennett, contractors, Ipswich, from the designs of Mr. Bisshopp. Messrs. Crisp & Smith executed the painting and stencilling; Messrs. Groom and Son, of Ipswich, the carved work.

**Gloacaenog, Denbighshire.**—The parish church was reopened on the 9th inst., after restoration under the direction of Messrs. Perkin & Bulmer, of Leeds, architects. The principal works have been the rebuilding of south wall, and forcing the roof to its original position by means of tie-rods and screw-jacks; new masonry and glass to north-east and south windows; two additional windows in north wall; repairing east window (5-light perpendicular), new tile floor, and Yorkshire steps and footpace to sacrum; new oak porch and north and south doors; new prayer desks and oak lectern; replastering walls internally and pointing externally; cleaning internal seating, oak screen, roof timbers, and pulpit from paint and varnish, and polishing same; reslating lych gate and new gate of old oak; new spouts, fall pipes, and drains (there being no provision for carrying off the water previously). The works have been carried out by Mr. John Morris, builder, Ruthin. The oak lectern is the work of Mr. J. W. Appleyard, of Leeds.

**Darlington.**—The new chancel of St. James's Church, Darlington, has been opened. The old portion of the church was completed in 1876. The additions now made comprise new chancel, organ-chamber, and choir vestry, with heating-chamber under. The chancel is lofty and of pleasing proportions; it is apsidal ended, and lighted by three geometrical traceried windows. The works have been carried out from designs of Messrs. Clarke & Moscrop, of Darlington.

**Manchester.**—The memorial-stone of a new central Board school, Deansgate, has been laid. The school is to be built from the designs of Mr. Henry Lord, whose designs were selected in competition. Messrs. W. Southern & Sons are the contractors. All the floors are fireproof, and communicate with each other by stone staircases. Stock brickwork and stone dressings are being used for the external walls. The schools when completed will accommodate 1,200 children, and there is also accommodation provided for a caretaker. The contract, exclusive of the foundations, amounts to 12,472*l.* 10*s.*



### SCHOOL BUILDINGS.

**Broughton, Manchester.**—In autumn last there was a limited competition for a Baptist chapel and school. The design submitted by Mr. G. Baines, of Accrington, was approved, and the school is now being erected at an estimated cost of 1,500*l*. It will be used as a school chapel until the new chapel is erected, and consists of a schoolroom 63 feet by 33 feet; 13 feet of the end of this room is cut off by glazed sliding screens so as to form two classrooms, each 13 feet by 13 feet, and inner and outer vestibule in centre with two pairs of swing doors. On one side of the main school is an infants'-room, with separate entrance, and 24 feet by 16 feet. A platform is placed at the opposite end of the school to the entrance, and behind the platform end wall is a vestry 11 feet by 13 feet, and another 21 feet by 13 feet with kitchen, lift, and heating-chamber under. The building will be Early English in style, of red stocks and stone dressings. The open-timbered roof and the joinery will be of pitch pine varnished. Mr. George Parkinson, of Ancoats, Manchester, is the builder, and Mr. Robert Cronshaw the clerk of works.

**Worcester.**—The foundation-stone of a school for the St. Peter Extra-Municipal School Board has been laid at the Cherry Orchard. The school is to accommodate 108 children—36 infants and 72 older children. The estimated cost of the site and building is 1,060*l*. The building will be a simple treatment of the Queen Anne style, and will be roofed with Broseley tiles. Mr. A. H. Parker, of Worcester, is the architect, and Messrs. H. and T. Dixon are the contractors.

**Sidcup.**—The National schools, which have just been completed from the designs of Mr. W. Seckham Witherington, F.R.I.B.A., have been opened by the Bishop of Dover. They are erected on a site in the Birkbeck Road, which was given by the late Miss Berens, and accommodate 160 children. The school-rooms are divided in the centre by revolving shutters and curtains, so as to separate the boys and girls, and in connection with each half there is a classroom. The elevation is plainly treated in the Queen Anne style. The nett cost of the schools, fittings, fencing, and playground was 963*l*, or 6*l* per head. The work was carried out by Mr. T. Gregory, of Clapham Junction.

### NEW BUILDINGS.

**Falkirk.**—Owing to the increase of the town, and the rapid development of the iron and timber trades of the district, the present post-office has been found quite inadequate for the requirements of the burgh. Contracts for a new building have been entered into, which will afford every facility for the increasing business. Mr. James M. Monro, architect, Glasgow, designed the plans.

**North Shields.**—Banking premises for Messrs. Hodgkin, Barnett, Pease, Spence & Co., are to be erected on the site of the old "Commercial Hotel" from the plans of Mr. F. R. N. Haswell, F.R.I.B.A., Mr. G. F. Shotton, of North Shields, being the contractor. The buildings will be in Classic style, of polished and moulded stone. The front shows two wings, with centre between slightly recessed. The banking-room will be 36 feet by 26½ feet, extending from front to back, and lighted from both sides. The whole of the ground floor is fireproof, so that if the upper or residential part were destroyed by fire, the bank would remain intact.

**Lanchester.**—The rebuilding of Lanchester Union Workhouse has been completed from the designs of Mr. W. Lister Newcombe, F.R.I.B.A., architect, of Newcastle-on-Tyne.

**Carlisle.**—The new mission hall erected in connection with the parish of St. Paul was opened on Sunday evening last by the Bishop of Carlisle. The site was generously given by the Duke of Devonshire. Mr. Geo. D. Oliver, A.R.I.B.A., was the architect; and Mr. T. Allen the clerk of works.

### ARCHÆOLOGY.

**Discoveries at Revel.**—The *Riga Zeitung* gives an interesting account of the valuable manuscripts lately discovered at Revel. It was proposed to refit an apartment on the ground-floor of the Hôtel de Ville, to serve as an additional receptacle for the city archives. But on examination it was found to be filled almost to the ceiling with manuscripts and books, the bulk of which belonged to the eighteenth and seventeenth centuries, while some thousands of them dated from the sixteenth, very many from the fifteenth, and some even went back to the fourteenth century. The most valuable among them was perhaps a collection of municipal account-books and similar documents. Hitherto only a few of the old city books of this once-famous Hanse town were believed to exist; but about forty of them, of all kinds, ranging from the fourteenth to the sixteenth century, have here been brought to light. Books of all kinds, such as were kept probably only in the Middle Ages, are here represented: accounts of the municipal lime-kilns, mills, exchange of coins, exchequer receipts, beginning

with the year 1432, registers of incoming ships, with abstracts of their bills of lading (from the beginning of the fifteenth century), port dues, lists of citizens, records of inheritances, ledger of receipts from succession duties, record of letters of convoy, several letter-books, one of which ranges from 1383 to 1425, and others for the end of the fifteenth and beginning of the sixteenth century. Among the other treasures here discovered is the chronicles of Dünamunde, long believed to be lost, and a manuscript belonging to the municipal archives of Lübeck. German mediæval archæologists are looking forward eagerly to a thorough investigation and calendaring of the contents of this precious "find."

### GENERAL.

**Mr. R. S. Ferguson, F.S.A.**, has been re-elected Mayor of Carlisle.

**Mr. Samuelson, M.P.**, has offered to contribute 2,000*l*. towards building a School of Science at Middlesbrough.

**Mr. H. H. Statham, F.R.I.B.A.**, at the meeting of the Nottingham Art Society, gave a lecture on "Form and Design in Music."

**Mr. Charles Groves** has offered the sum of 10,000*l*. to the Bishop of Liverpool for the building of new churches.

**Mr. J. Lewis Thomas, F.S.A.**, has been appointed Chief Surveyor to the War Office, vice Mr. J. Atwood, who has retired.

**The Strand Theatre** has been rebuilt from designs by Mr. C. J. Phipps, with the improvements suggested by the authorities, and will be opened on the 18th.

**Mr. W. H. Smith, M.P.**, has given 500*l*. towards the restoration and enlargement of Portsea Church, in which Brunel, the engineer, is buried.

**Messrs. Falkiner & Tancred**, of Westminster, and William Arrol & Co., of the Dalmarnock Ironworks, Glasgow, have jointly undertaken the construction of the Forth Bridge.

**Rev. E. Husband**, of St. Michael's, Folkestone, has received an anonymous gift of 1,000*l*. towards the completion of the church by the addition of a new aisle.

**The Worcester Corporation** has received an offer, under certain conditions, of 500*l*. from Mr. Laslett, the member for the city, towards the purchase of the late exhibition buildings for purposes of public recreation.

**The Albissima Paint Company** have, in consequence of the constant demand for mixed colours, been obliged to prepare their paint ready for use, and to supply it in all colours. At the same time they have added colours for grounds for graining.

**Buchan Hill, Sussex.**—The facing bricks for this mansion, which was illustrated last week, were specially made by Mr. Thomas Lawrence, of Bracknell. They number 300,000, and are the No. 4 orange-red hand-made pressed, the size being 9 inches by 4½ inches by 2 inches.

**The Edinburgh Town Council**, in view of anticipated applications by certain private companies for provisional orders under the Electric Lighting Act to supply the town with electric light, have resolved to give notice of application for an order, so as to retain in their own hands the regulation of the light.

**St. Peter's Church, Plymouth.**—At a sub-committee meeting held on Monday, November 6, 1882, the following resolution was proposed by Mr. John Shelley (the present Mayor of Plymouth) and carried unanimously: "That the committee desire to take this opportunity of expressing their high appreciation of the architect's conduct throughout the whole of the very difficult controversy with the builder, and their gratitude to him for his diligent attention to their interests, and hereby offer him this expression of their thanks."

**Royal Scottish Academy.**—The following members form the Council for the current year:—Sir William Fettes Douglas, president and trustee; Messrs. W. F. Vallance, Robert Gibb, Arthur Perigal, Wm. McTaggart, Robert Herdman, Alex. Fraser, George Hay, secretary and trustee; and Arthur Perigal, treasurer and trustee. The following office-bearers have been elected:—Messrs. J. M. Barclay, trustee; Waller H. Paton and Gourlay Steell, auditors; John Hutchison, librarian; Robert Herdman and W. F. Vallance, curators of library; J. M. Barclay, Wm. McTaggart, W. E. Lockhart, and Robert Gibb, visitors of the Life Academy.

**The Liverpool Architectural Society** held its third ordinary meeting on Wednesday evening, at the Royal Institution, Colquitt Street. Mr. Thomas Cook (vice-president) occupied the chair, and there was a good attendance of members. The following prizes, given by the society, were awarded:—Class of Construction and Design: 1. Mr. T. W. Walshaw; 2. Mr. T. Havelock Sutton. Prizes for measured drawings of Birkenhead Priory: Messrs. W. M. Mercer and G. Hornblower. Mr. H. B. Bare read a paper entitled "A Few Suggestions for Students' Classes," in the course of which he asked if the training of architectural students was sufficiently directed to the artistic side of the profession. The answer, he feared, must be in the negative, and unless some special means were provided for the student out of the daily routine of an office, he would not become in effect an artist at all.



# The Architect.

## THE DRAWING OF THE FIGURE BY STUDENTS OF ARCHITECTURE.



It is frequently urged upon architects, and especially upon those who as yet are chiefly occupied in learning their art, that the late WILLIAM BURGESS, whose authority is entitled to great weight upon such a question, attached the utmost importance to a cultivation of the drawing of the human figure as a means of acquiring facility in both draughtsmanship and design; and when the new President of the Architectural Association makes pointed allusion to this in his recent inaugural address, perhaps no one will hesitate to approve what he says. At the same time it is not desirable that the observation should always pass without examination, or the argument which lies concealed within it be accepted always without reflection, at a time when everything that concerns drawing is so especially interesting, as it at present is, in its bearings upon English architectural progress.

The doctrine that the delineation of the form and features of man is the highest exercise in artistic drawing may remind some sceptical persons of that celebrated trophy of art concerning which the lion in the fable made the apt observation, that if it had happened to be sculptured by a lion instead of a man, *Felis* would have been represented conquering *Homo*, instead of *Homo* conquering him. Now, if the candid opinion of the intelligent occupants of the baboon cage, for instance, at the Regent's Park, could be fairly ascertained, one can scarcely take leave to suggest that the delineation of the baboon figure would be voted the perfection of artistic practice; but there are specimens of animal elegance in the gardens, nevertheless, which even Queen ELIZABETH herself, who above all things "loved to look upon a goodly man," might safely have hesitated to place in a lower rank than the goodliest man she ever looked upon. Not only so, but, when the human figure in art, as will be remembered, may be either draped or undraped, and in not a few cases is preferably draped, whilst our other competitors for the palm of natural beauty are never otherwise than as Nature herself has clothed them, here again we have an incident which must certainly be scored in favour of the lower types of beauty. In a word, although there is much that is satisfactory to our instinct in the dogma which assigns to the human figure not only supremacy but perfection—for the gods themselves with the art-inspired Hellenes were men, and it was only such as the clumsy Egyptians who idealised them in the form of bullocks and cats—yet it is difficult to demonstrate that instinct represents in this case so well as it ought to do the conclusive judgment which is permitted to ignore the logical process it represents only when this is too plain to demand recognition.

If we may therefore dismiss the mere assumption that there is a perfection of beauty in man, and look elsewhere for a reason why the drawing of the figure should be advocated by such an artist as BURGESS for the education of an architectural designer, we may submit more reasons than one; for, as ought perhaps to have been said before, the accuracy of the doctrine, whatever may be said of its first principles, will no doubt be admitted in practice by almost all who are qualified to judge.

One reason, then, seems to be simply this: that the human figure, whether draped or not, affords us the best opportunity of thoroughly understanding what we are drawing. We are so familiar in our own person with every feature of it, every function, and every form of change, that a comparatively slight initiation into the mysteries of its more occult construction is sufficient to enable us to enjoy all the intellectual profit and delight which follow upon a sound critical knowledge of our subject. If we would draw a horse, for example, with equal science, it becomes an anatomical exercise rather than an artistic; and still more in the case of a tree or a flower, not only is the artist's ignorance of structure in perhaps every possible case all too manifest to the scientific botanist, but the game is never worth the candle, for he might just as well bestow his diligence upon the study of a lowly bunch of turnips as upon a lordly oak, or even better on a tuft of dock and

thistle than a bouquet of roses. It is this kind of acquaintance, then, with the articulation of his subject that gives the figure-draughtsman his peculiar interest in his work, and confers upon him also his peculiar success when it is well done; and we may reasonably affirm that the student of architectural drawing and architectural design, who is able to achieve a moderately sufficient facility in dealing with the human figure, must find himself, if he possesses a real aptitude for architecture as well, all the better able to handle his pencil *articulately*, whether in free-hand work or in geometrical. But for this consideration we might probably hesitate to acknowledge all at once the bearing of a life school, or even one much less ambitious, upon the question how to develop into elegance and grace, with drawing-board and square, the rigid and conventional work of the builder.

The distinction is perfectly clear which separates the wholly natural character of the human figure from the wholly conventional work of architectural design. Even the introduction of drapery, within any acceptable limits, cannot be said to conventionalise the figure; and it is only when the artificial in clothing takes the subject into the domain of the milliner and *modiste*, and of course the fashionable or unfashionable tailor, that the distinction in some measure disappears, and then only in the eyes of the philosopher rather than those of the artist. How then is the articulation of the natural figure really to come in aid for the study of the articulation of conventional building? This is a question not easily answered. No doubt the principle of articulation—that is, of constructive fitness—is primarily the same in Nature and in building; but this does not seem to carry us much farther, for the animal anatomy, even when far less complex than in the structure of man, is far more so than the most scientific devices of the building art. The articulation of architecture, indeed, is vastly exceeded, if not in the work of the civil engineer, certainly in that of the machinist in a thousand instances. Nevertheless we will still consent to adhere to our proposition that figure-drawing teaches the principle of articulation, and simply leave the architectural student who draws the figure to find out for himself, as he readily will do, how to articulate his design on the principles which Nature exhibits, where others for want of this supplementary exercise may often fail to do so. For, after all, it is not the imitation of natural construction that is requisite, but the introduction of the artistic-constructive, as an element of common-sense design, from the highest effort down to the lowliest; and we need not hesitate to say that, if architects could be led to unlearn what they have often so painfully learnt in academical superfluousness, and to learn what they have not learnt, if in the form of thought rather than of practice, with regard to that which lies beneath the surface, as the muscle lies beneath the skin and the bone beneath the muscle, then the result might be looked for, we will not say in the abandonment of the ancient mannerisms which we call styles, but surely in the introduction into the practice of such styles of the important element of scepticism, whereby in time there might appear such forms of modification as should reconstitute the whole of the detail.

But another effect, and to many the chief of all, which the study and exercise of the drawing of the figure may produce in architecture, must obviously be the acquirement by the very best means of that peculiar power of freehand draughtsmanship which may be called the very language of the highest endeavours of artistic design. In all circumstances we may say that figure-drawing is a test of the artistic power of the draughtsman. The designer who can accomplish it freely can with equal facility accomplish all else, and amongst the rest even the most mechanical kind of the work of square and rule. Of this there are many examples everywhere around us.

At the same time we must not fail to observe the fact that the mere painter does not make a good architect. (May we suggest also that the mere *sketcher* does not make a good architect?) But this is when he understands painting alone, and not architectural construction at all; and no one will be prepared to say that the architect should allow himself to neglect or ignore architecture because of his feeling himself competent, however much, to draw the figure. Conventional forms to suit the artificialities of building must always be the first consideration, and the facilities of representation always subsidiary; and this of course every good architect clearly understands.

It is with no small satisfaction, therefore, that we observe the progress which is being made in the direction of the



encouragement of figure-drawing amongst our young architects. Of landscape drawing and ornament we might also say much, but scarcely so much as of the figure. Both of these exercises may be directed to more or less of mischief, and indeed to our knowledge have been, as regards both draughtsmanship and design; but of the other we can hardly admit that it is possible to pervert it, or to bring it down, except in vicious caricature, to a lower level than that of high practical art universally available.

### PERSPECTIVE AND ITS PROFESSORS.

By W. WATKISS LLOYD.

IN the interesting biography which Mrs. DE MORGAN has recently given to the world of her late husband, the first Professor of Mathematics at the London University—a worthy as well as affectionate record of a man who combined wit with science, and simplicity of character with good sense and resolute high-mindedness—it is mentioned that in the books of his library, which Lord OVERSTONE after his death purchased and presented to the University, will be found many a piquant manuscript note or pertinent annotation. This notice reminded me that on one of my own shelves I had a little book, picked up at a bookstall many years since, containing the professor's autograph. I found it relegated to a corner where it had the companionship of many other volumes, all condemned after brief but sufficient examination to definitive oblivion. Drawn forth by unexpected release from this limbo it proved to be "The Art of Drawing in Perspective Made Easy to those who have no Previous Knowledge in the Mathematics. By JAMES FERGUSON, F.R.S., revised by DAVID BREWSTER, LL.D., F.R.S.Lond. & Sec. R.S.Ed., &c. A New Edition. 1823." But across the title-page and immediately below these titles of honour and guarantees of competence is to be read this scholion:—

Sir D. B. at this date published more than one mathematical book as the translation of LEGENDRE'S geometry and this. He was not, I should think, mathematician enough for either. The translation of LEGENDRE was certainly done by GALBRAITH.—A. DE M., Feb. 14, 1863.

It may be remarked that DE MORGAN was in error, for the translation of LEGENDRE was by THOMAS CARLYLE, who appended thereto an essay on Proportion. But it would be unfair to Sir DAVID BREWSTER, who had his own titles to respectful consideration, to give public circulation to such a criticism without putting its accuracy to sufficient test; and the critic, on his own part or his representatives, would have a right to challenge an appeal to the matter of fact as protection against suspicion of temper or captiousness.

The Preface to "The Art of Drawing in Perspective Made Easy" contains some curious observations on the treatment of perspective problems by RAPHAEL, for which the revising editor may not have been originally responsible, but which, in any case, he neglected either to revise or protest against. They might not have been worth adverting to, but for their supplying an occasion to recognise what true artistic genius is displayed in the deviations from the rigid formulas of prosaic science;

One instance, it is said, of want of this branch of knowledge—perspective—in the works of one of the greatest painters that ever existed, the celebrated RAPHAEL URBIN, is a very capital mistake in the historical picture of OUR SAVIOUR'S Transfiguration on the Mount. He is represented, with those who were then with Him, almost as large as the rest of his disciples at the foot of the mount, with the father and mother of the boy whom they brought to be cured; and the mother, though on her bended knees, is more than half as tall as the mount is high. So that the mount appears only the size of a little hay-rick, with a few people on its top, and a greater number at its bottom on the ground; in which case a spectator at a little distance could as well distinguish the features of those on the top as those on the ground. But upon any large eminence deserving the name of a mount that would be quite impossible. My only reason for mentioning these extraordinary particulars is to show how necessary it is for painters to be well acquainted with the rules of perspective.

But the reason thus given for so rare an exposition stands in no relation whatever to its effect, which is to show conversely how desirable it is for those who treat of perspective to be well acquainted with the principles and prerogatives of expressive painting. Speaking generally, the works of RAPHAEL are rather a proof of how small a modicum of the rules of perspective were needed for the successful execution of historical compositions. It may be doubted whether the science

of his time was prepared to grapple with any problems than such as could be solved by the simplest application and aid of parallel perspective. This sufficed for the co-ordination of the upper and lower groups of the *Dispute of the Sacrament*, and for the architecture of the spacious vaulted halls of the *School of Athens*. In this last composition perspective is only materially at fault in the lines of the block, against which a solitary booted figure leans his elbow as he sits in deep thought well forward in the foreground. The magnificent cartoon for this grand composition is preserved in the Ambrosian library at Milan. The small space in the corner, which the artist filled in the finished work with his own portrait, and that of his master, PIETRO PERUGINO, is disappointedly left a blank, and the upper architecture of the hall is not included; but otherwise the only other blank is a space left for the studious figure already referred to. The suspicion is strong that the painter left it so when he was quite resolved as to the attitude which he required for the figure, but was not satisfied as to the treatment—which ultimately was faulty enough—of the oblique perspective of the altar-like object which serves him for a desk.

In the cartoon of *Paul Preaching at Athens* it is clear, from the relation of the architectural background to the groups, that its general distribution and ordination were devised by the painter himself, however he may have committed to others the details. Here again we note an instance of palpable inaccuracy where there is requirement for other vanishing points, besides the point of sight and distance points, for the accurate delineation of the capitals of columns under the circular architrave of the temple. But the perspective relation of all the figures, which are introduced at different distances and levels, is perfectly observed. If we carry lines from the head and feet of St. PAUL—the measure of his erect stature, to the point of sight in one direction, and the plane of the ground line of the pavement on which he stands in the other—we shall find that DIONYSIUS is nearer than St. PAUL to the picture plane, and the figures of the other listeners as they are more and more remote, have dimensions assigned to them which are in strict relation to their respective distances.

What, then, is the *rationale* of the abnormal treatment of the groups of the *Transfiguration*? We may ask the same question in regard to some of the cartoons, where the explanation is more simple. In the *Calling of Peter* the Apostles all stand on level ground, and their heads are on a level, as ranging with the plane of the horizon. These heads, moreover, are of general uniform magnitude, albeit the heights of the Apostles at the extreme left, as more remote from the front, receive due perspective diminution. But the expression of the faces was what RAPHAEL was chiefly concerned about and treated as all-important, and at all risks he retained the magnitude which lent this best effect; at the same time, he so successfully masked the incongruity by covering up the limbs in drapery, and made a palpable contrast so dexterously, that the primary incongruity usually escapes notice altogether.

The far more extraordinary licenses of which he made masterly use in the *Transfiguration* are of a different character. Voluntary licenses they are in the strictest sense of the word, and not lapses from ignorance, as our author assumes—an assumption disproved sufficiently by due perspective management in other compositions. His problem is the harmonious combination of incidents which are strongly contrasted but correlative in virtue of their very contrast. In the group on the lower ground level the demoniac boy is convulsed in the midst of his excited and afflicted kindred, who are appealing for comfort and aid to the Apostles—the Apostles, who on their part already recognise their inability and are reduced to refer to the power of the absent Master; on the summit of the mount JESUS appears glorified, and announced by the divine voice as all-sufficing, supreme at once over the representations of both prophecy and the law. Humanity, in fact, is typified below, afflicted, despairing, perplexed, and hopeless, but for rescue by superior power and interference; and in the scene above the justification of such a hope is manifested when JESUS, as the embodiment of all that the ages had slowly or amidst conflict been evolving, receives supernatural sanction of closing once for all the conflict of pretensions between free prophesying and formal legality—between MOSES and ELIAS. The two incidents were therefore to be represented not more positively distinct in scene than interlocked by sympathy. The separation physically is sufficiently indicated by the adoption



of distinct perspective horizons for the two scenes ; below we are on the same ground level with the Apostles and their supplicants ; above we have the summit and surface of the mount under our view. RAPHAEL is as skilful in reconciling us to accepting typical intervals of space as SHAKESPEARE in shortening up a lapse of time.

The true relations of the two main groups, and of the elements of each in themselves, can scarcely be duly appreciated in reduced copies, or indeed by any but those who have had the happiness to stand before the masterpiece itself in the Vatican. It is only then that we recognise, but recognise at once, the full effect in majestic isolation of the glorified figure of the SAVIOUR. When only the engraving has been before us, what is apt to escape observation, notwithstanding the distinctly smaller scale of MOSES and ELIAS, is that they are at some distance behind ; are not regarding or adoring CHRIST, but interchanging communication with each other. By virtue of tone and colour this becomes self-evident ; and, moreover, while the figure of CHRIST receives light from the left, like the group of Apostles, this pair is illuminated upon opposite sides by the burst of radiance from behind which expressively typifies presence and announcing voice. To the same effect the Divine treatment, both in tones and positive magnitude of the three prostrate Apostles, gives them a third distinct position, and completes the marvellous gradation of interest in a composition of which the ultimate and intimate unity comes home more absolutely for those who are worthy of the highest devotional art the longer it is contemplated.

### CUTTING TOOLS.\*

THE modern epic, according to Mr. Carlyle, should sing "Tools and the Man," instead of "Arms and the Man"; and in spite of temporary fits of the war fever, England is beginning to see that her very existence is dependent on the possession and use of improved tools for handiwork and machine work. Hitherto in this country we have been accustomed to treat tools empirically ; it was not supposed that the forms of them could be made subjects of calculation, and that theory was no less concerned in the tools employed in erecting a structure than in the structure itself. It was long ago pointed out by the late Professor Willis that in no department was there so much distrust of science as in practical mechanics, although in none was co-operation more needed. "The untaught inventor," it was said, "struggling to give form and reality to his conceptions of a new machine, is in reality practising imperfectly and unknowingly the very geometrical science he despises, and which, if he had acquired its elements, would at once have shown him how to systematise and arrange his ideas." There has been some improvement of late years, but it cannot yet be said that in general there is much regard given by practical men to the theory of the machines and tools they employ. As a means of increasing the interest in tools, we gladly welcome the volume by Professor R. H. Smith, of the Mason College, Birmingham, which is, we believe, the first of the Manuals of Technology about to be issued by Messrs. Cassell, Petter & Galpin. Unlike so many books for students' use, it is not a compilation. The author would appear to have made the theory of tools a specialty, and we doubt if a book can be found in the English language on the subject which contains so much that is novel as well as useful. If the other volumes in the series will in quality correspond with Professor Smith's, it may be said that the publishers have surpassed all their past efforts in furthering industrial education.

Professor Smith evidently believes in the value of the principle contained in the maxim, "a little, but well." He does not attempt to treat of every kind of cutting tool. Those described in his nine chapters are as follows :—Chisel tools for wood ; chipping chisels and hand-planes ; machine-planes for wood ; saws and milling machines ; planing, shaping and slotting machines ; lathes ; cutting tools for lathes ; boring and drilling tools and machines ; and punching and shearing machines. The principles of all those machines are described in a style which ordinary workmen can understand, and they are illustrated by excellent plates showing sections of machines. There is nothing that can be called "amateurish" in any part. From beginning to end the book suggests that it was written in a workshop.

Among the most interesting details in the book are those relating to the character of shavings. It is needless to say that the length, breadth, and thickness of shavings, whether of wood or metal, indicate the extent of the power which was employed to produce them. Hartig's theory is that "the cutting force varies in simple proportion to the depth of shaving," but this is not accepted by Professor Smith. He has made many experiments, which he

intends to continue, in the Mason College, and he "trusts that the law connecting the force with the depth and breadth of the shaving removed will be ultimately discovered. It is evidently upon the magnitude of this force that all proper calculations made in designing the machine must be based."

The following experiments made by Professor Smith on yellow pine and mahogany, with a chisel  $1\frac{1}{2}$  inch broad, will suggest the extent to which measurement is applicable to the production of a shaving :—

1st. Yellow pine plank, well-seasoned and straight-grained,  $1\frac{3}{8}$  inch thick. The chisel-cut taken was the whole thickness of the plank.

(a) Cut parallel to the grain. Chisel  $1\frac{1}{2}$  inch wide by  $\frac{3}{8}$ " thick ;  $\frac{5}{16}$ " length of bevel ;  $\frac{3}{32}$ " length of small facet forming cutting edge.

Thickness of Shaving.	Force required to drive Chisel forward.
0.01 inches . . . . .	14 lbs.
0.03 " . . . . .	21 "
0.1 " . . . . .	35 "
0.18 " . . . . .	41 "

(b) Cut at  $45^\circ$  to the grain. Chisel  $1\frac{1}{2}$ " wide by  $\frac{7}{8}$ " thick ;  $\frac{3}{8}$ " length of bevel ;  $\frac{3}{32}$ " length of small facet.

Thickness of Shaving.	Force required to drive Chisel forward.
0.02 inches . . . . .	28 lbs.
0.03 " . . . . .	37 "
0.11 " . . . . .	46 "
0.2 " . . . . .	78 "

(c) Cut perpendicular to the grain. Same chisel as in (b).

Thickness of Shaving.	Force required to drive Chisel forward.
0.025 inches . . . . .	45 lbs.
0.08 " . . . . .	90 "

2nd. Mahogany of common cheap quality, quite dry.

The same chisel was used as in (b). It was found impossible to measure satisfactorily the force required to cut parallel to the grain, because of the irregularity of the splitting.

Cut at  $45^\circ$  to the grain.

Shaving 0.02 inch thick. Force required 57 lbs.

Cut perpendicular to the grain.

Shaving 0.01 inch thick. Force required 61 lbs.

Examining the numbers for yellow pine, cut parallel to the grain, it is seen that the force does not increase nearly so fast as the thickness of the shaving. It was shown that the part of the force which is spent in splitting the material increased faster than this thickness. The above result shows, then, that most of the force in this case is spent not in splitting, but in the penetration of the cutting edge, the power to drive which forward into the wood, as previously described, increases only slowly (if at all) with the thickness. To this latter there is also to be added the friction between the chisel face and bevel and the cut surfaces.

Another extract from the chapter on saws may afford an example of Professor Smith's method of exposition. It is given in support of the statement that the power required to drive a saw becomes greater in proportion to the width of the cut it takes.

In the hand-saws used in England the cutting-stroke is a push outwards from the shoulder of the workman. This mode of using the tool has been perpetuated by the Anglo-Saxon race in the United States, Canada, and the British Colonies. The blade of the saw is thus thrown in *compression*, and in order that it may have sufficient stiffness to prevent it buckling, it requires to be made far thicker than if it had to transmit the same force in tension only. This liability to buckle is illustrated by lads beginning to learn to saw, who not unfrequently injure a saw-blade by the unsteadiness of the thrust they give to it, which leads to the teeth catching on one side of the cut and a sharp bend, or even a crack, being caused in the blade. As it is almost impossible to remedy such an injury perfectly, the saw becomes permanently damaged. On this account chiefly, also, English saw-blades for hand-work are (and require to be) made of a much better quality of steel than would otherwise be necessary.

In Germany, Italy, and most of the European Continent, as well as throughout the chief peoples of Asia, hand-saws are used in tension, the cutting stroke being a pull towards the chest of the worker. In consequence, the blades are made very much thinner than those of English saws, less material is converted into sawdust, and less exertion is required for a given rate of cutting.

The English method, however, has this advantage, that a man standing upright can exert a considerably greater force in thrusting forward with his arms than he can in pulling inward. This is still more the case if he leans forward over his work, because he can then throw a large portion of his weight on the saw-handle to drive it forward. The result is, that if an English carpenter be pitched against an equally strong German carpenter, each armed with his own tool, the Englishman will saw through as great, or possibly a greater, length of the same thickness as the German will. But the Orientals sit to this sort of work, and, planting the feet against the log being sawn, pull outwards by the contraction of all the muscles of the body. As is well known to us, from our familiarity with the English style of rowing, this is by far the most powerful attitude into which the human muscular system can be thrown. Thus, unless the peculiar shape and position of his work compels, say, the Japanese carpenter to assume an awkwardly cramped position, he is enabled, with his thin, broad saw-blade, to get through his work with far less fatigue and with greater rapidity than an Englishman can.

Thin saws worked in tension, being extremely pliable, are more likely to make a cut that is not quite straight. The thick saw-blade of the English or American make has superior stiffness, and therefore superior

\* 'Cutting Tools, worked by Hand and Machine.' By R. H. Smith, M.I.M.E. Cassell, Petter & Galpin.



guiding power to keep the advance of the cut always in the same straight line; but this superiority in guiding power is again neutralised by the fact already mentioned of the thrust tending to bend the blade, while the pull on the thin saw tends to straighten its blade.

The price charged for Professor Smith's book is only 3s. 6d., and it is therefore within the means of apprentices and workmen.

## ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE second ordinary meeting of the Institute was held on Monday evening, Mr. Horace Jones, President, in the chair. A letter from Mr. Thomas Fairbairn, Hon. Sec. of the Edinburgh Architectural Association, was read calling attention to the forthcoming exhibition of architectural drawings to be held under the auspices of the Association. Framed or unframed paintings, drawings, sketches, and photographs, sculpture and models, illustrative of architecture, ancient and modern, would be received on December 13 and 14. It was proposed to inaugurate the Exhibition on December 22. Copies of the conditions would be sent to the Institute for disposal to the members.

Mr. Edward P'Anson, F.G.S., then read a short paper on

### Mediæval Buildings in Cyprus.

Mr. P'Anson, at the commencement of his paper, said that having read the recent work written by Chevalier Cesnola, containing the account of his archæological researches in Cyprus, he had determined to visit the island in hopes of discovering some fragments of Greek work among the many ancient temples, &c., said to exist there. But in this he had been disappointed. This small island, which was but 150 miles long from east to west and 60 miles wide in its broadest part, was situated contiguous to the mainland, and in the very heart, as it were, of all the great nations of old. Little remained of the architecture of the more ancient conquerors of the island. In 1191 Richard Cœur de Lion had taken Cyprus and sold it to the French Crusader, Guy de Lusignan, whose dynasty held peaceful and prosperous possession until 1372, after which it was held successively by the Genoese and the Venetians down to the Turkish conquest in 1570. Of whatever works were possibly left by its Egyptian or Persian masters no traces remained. The few architectural constructions which preceded those of the Romans were credited to the Phœnicians. Of the Byzantine occupation some slight vestiges, Mr. P'Anson thought, were left, but of Arabian architecture he could light on no such fine examples as were to be seen at Cairo. Of the French epoch, however, many interesting specimens remained. Of Italian Renaissance but little was to be found. The Turks had built a few mosques, a few tombs, and some aqueducts. Their plan was to appropriate any buildings left by their predecessors which they found suitable for their own purposes, destroying all objectionable features, such as carved images, painted glass, or mural decorations. Amongst the most ancient works was a tomb near Larnaka, partly hewn in the rock and partly constructed, having an outer and an inner chamber. The former was covered with a monolith, fully 12 feet wide, the soffit of which was slightly hollowed out in the form of a flat arch. Another pre-Roman monument was that known as the Ai Katharina near Salamis. It was also presumably a tomb, and was 33 feet long and 20 wide. The roof was built of colossal stones, and formed a pointed arch of the rudest construction. On one side, at right angles to the larger chamber, was another called the Treasury, the roof of which was formed by two inclined stones abutting against each other like the stones at the entrance of the Great Pyramid. There was a cornice to the large chamber formed by a cavetto moulding, like the external cornices of the Egyptian temples. There were indications that the covering stones of the arched roof were stepped like those of the pyramids. In two only of the many tombs which Mr. P'Anson saw in various parts of the island was there any architectural form. One was near Kyrenia, and was evidently late Roman. The only one he actually saw opened was near Salamis; it had an Egyptian cavetto cornice like that at Ai Katharina. Of other classical work he found an Ionic capital near Larnaka, and on the south-west coast many marble columns and fragments of such. But the greatest number were at Paphos, where there were remains of a late Roman temple. Elsewhere he observed much defaced fragments of Corinthian capitals, which he thought were Byzantine of the sixth or seventh century. At Nikosia there were columns of late Roman work. At Salamis, besides the vestiges of the old city walls and of a Roman aqueduct, there were the remains of a large building, 60 feet by 180. On the site of the ancient city nothing was left but vast heaps of worn and broken masonry. Near Nikosia he visited some ruins of walls built of huge stones to the thickness of 16 or 17 feet, as well as the remains of very large tanks formed in the rock. Of the best style of Græco-Roman work was a fine marble sarcophagus, standing in the inner court of the Abbey of Bella Pais. At Kuchlia, where was the official residence of the Roman pro-consul, Sergius Paulus, mentioned in the Acts of the Apostles, the site of the great Temple of Venus, 221 feet long by 167 broad, was traced by Cesnola. He had himself failed to trace the site of the temple described by Cesnola, who found traces of mosaics and fragments

of colossal statues. The situation of the temple was commanding, and not far distant from the sea. Considerable remains of the outer walls of the temple existed, but the ground was so thickly strewn with stones as to leave no sign of any building. Coming down to later periods, Mr. P'Anson said there was a fine example of Italian Renaissance in the gateway leading from the harbour of Famagusta, in which town there was also a handsome arcade in the same style. The fortifications, as well as those at Nikosia, and of Kyrenia especially, were fine specimens of mediæval military architecture. What, however, was certainly the most interesting architectural feature in the island was the noble group of mediæval churches which belonged to the time of the Lusignan kings, and ranged from the end of the twelfth to the end of the fourteenth century. A German pilgrim in 1341 was more struck with the churches of Famagusta than with those he had visited in his travels on the mainland. Men from every clime were met in its streets, and the riches of its inhabitants was the common talk. It was the emporium of the East, and commerce was so productive that the proceeds of one voyage sufficed a merchant to build a beautiful church in honour of the Blessed Virgin. From the time of the murder of Peter I. the fortunes of the Lusignan family began to wane and the prosperity of the country to decline, though commerce still held its ground. Nikosia was so populous a city at the time of the Turkish invasion that the Ottoman commander slew 20,000 persons of both sexes, and carried 2,000 youths into captivity.

These Mediæval churches were to be found at the two towns Famagusta and Nikosia; and as the Turks had used some for mosques and others for storehouses, they had been, with the exception of the painted glass and the sculptures, fairly well preserved, particularly those at Nikosia. At Nikosia was the cathedral church of St. Sophia, the church of St. Katherine (both used as mosques), and a third, the church of St. Nicolas, the interior of which he failed to see, now used as a storehouse for grain. Neither in these nor in the ruined churches which Mr. P'Anson saw at Famagusta were there transepts. Nor was there any triforium over the aisle arches, the peculiarity in their construction being that the only roof each had was the stone-vaulted one covering the aisles or nave. The French architects who designed and built these churches, although in other respects they scrupulously retained the French ecclesiastical style, evidently adopted the flat roofing common in the island. St. Sophia's at Nikosia was 232 feet long and 87 feet wide. The east end was semicircular inside, semi-octagonal outside. The height of the nave was 65 feet, that of the aisles 38 feet. The columns were circular with octagonal bases. The nave was divided into six bays, and the east end into five; there was a grand porch at the west end. There were two western towers, both left unfinished, and it had evidently been intended at a future time to prolong the building. The style, which was good throughout, was Decorated. The cathedral had the peculiarity of a door at the east end, and there was another door on the north side. The masonry of both was in marble, and both seemed to have been made later than the original construction, yet the architectural details matched with the rest of the building. Some of the enrichments in the deeply-recessed doorways of the west front seemed also of later work. They, too, were in veined marble, the body of the cathedral being of a fine hard limestone. St. Katharine's was a vaulted building, consisting of a nave only, which was 58 feet by 27 feet. The height was calculated at 52 feet. This church also had a flat roof. By one account it appeared that there were several interesting sepulchral stones which he had not been aware of, and which were likely to escape observation from the Mohammedan custom of putting down carpets. Adjoining the church of St. Katherine—the windows of which were in the best Decorated style—were traces of low buildings, probably of a conventual establishment, and indications of former cloisters. The style of the third—the church of St. Nicolas—appeared to be later than that of St. Sophia. It had three eastern apses and an octagon tower and dome, the plan being probably that of a Greek cross. The remains of churches were numerous at Famagusta, and were said to number twenty. The cathedral of St. Sophia, also used as a mosque, was well preserved, although considerably injured in the Venetian bombardment. The columns were circular; the nave was divided into seven bays with chapels on each side. It was still later in style than St. Sophia at Nikosia, the style being in parts Flamboyant. Its inside length measured 176 feet, and its total width 75 feet. The height of the nave Mr. P'Anson reckoned at 75 feet, and that of the aisles at 40 feet. Each aisle had an eastern apse. The piscina was still perfect, and there were recesses in the walls of the north and south aisles. The western end was terminated by two noble towers with a fine triple doorway. There was no open porch as at Nikosia. This cathedral had lately been well illustrated by Mr. Vacher in the "Sketch-book" of the Architectural Association. Of none of the many other churches in ruins at Famagusta could Mr. P'Anson learn the name. Wondrously well preserved fresco paintings were still to be seen on the walls of some. Amongst others, he noticed one representing St. George and the Dragon. But the style of these frescoes was not good. In one of these half-ruined churches he observed the haunch of the arches of the roof confusedly filled



with large hollow pots, as if to lighten the construction. There was another ecclesiastical building dating from the Middle Ages, which was of singular interest, and in great part marvellously well preserved. It was called the Abbey of Bella Pais. It was beautifully situated on the side of a mountain, overlooking a fertile plain and the sea between the island and Asia Minor. On the south side of the group of buildings forming the abbey was the church, planned in the shape of a Greek cross. Mr. P'Anson deemed it pre-mediæval in date. North of this was a cloister, three sides of which still remained. This cloister formerly enclosed a spacious court, and on its north was a noble hall, 100 feet long by 32 wide and 40 in height. It was lit by windows on the north side commanding a lovely view, and by a rose window at the west end. This was assumed to have been the refectory, on the north side of which was a small pulpit with steps leading into it formed in the thickness of the wall. Below this handsome room was another of the same size, divided into compartments. Upon the lintel over the door of the great hall were sculptured three shields, one representing the Jerusalem Cross, the middle one the royal arms of the Lusignans, and the third a lion rampant. There were in the island many other mediæval ruins and some remains of Renaissance work, not only those of ecclesiastical buildings, but also of castles, of which latter there were extensive relics at Kuchlia, one very perfect at Episcopi, some near Larnaka, and some in the town of Nikosia, in whose narrow streets, round St. Sophia's Cathedral, might also be seen several mediæval doorways. The paper concluded with slight references to the scanty remains of Arabian buildings in Cyprus, and to the domestic architecture of the Turks.

Mr. J. T. WOOD said he had visited Cyprus in 1878, not for the purpose of studying the architecture of the island, but to report to the Trustees of the British Museum whether it would be worth while to undertake any excavations. He was there only a month, and ill half the time, so that he had not much opportunity left to study the architecture, and he could only make a few remarks on the churches at Famagusta. Though not a student of Gothic architecture, he had observed the peculiarly good and bold character of the style of these churches. He had not, however, been able to find more than twelve churches, including the cathedral, though he had walked all over Famagusta several times. The cathedral and three of the other churches had very perfect stone roofs, and at a small expense they might be made suitable for Protestant places of worship. The cathedral was especially noticeable for grace and beauty of general design, proportion of parts, and detail. The gables and doors were peculiarly graceful, the gables being enriched with well-designed crockets. In the side wall of the cathedral he had found an inscription of the fourteenth century describing when the cathedral was built, and therefore determining the date of its erection. He had been looking through some papers for the date, but was unable to find it; he believed it was 1329. In fact it was only at seven o'clock that evening that he knew Mr. P'Anson was to read a paper on Cyprus, otherwise he would have brought some illustrations to supplement his remarks. He should, however, at a future meeting be happy to submit them, and make them over to the archives of the Institute. A thought that struck him in his short inspection of the churches was that they presented quite a new phase of Gothic. Students of architecture should especially visit Famagusta to study the style, and he would recommend them to measure and make careful drawings of all the details of these wonderful churches. Mr. P'Anson had said that the Turks had obliterated or effaced all figure representations; in one of the churches, however, connected with a convent of nuns—he did not at the moment remember the name—there were a series of wall paintings containing at least twenty figures. Mr. Wood concluded his remarks by referring to the great number of rock-tombs at Paphos. They were most curious and wonderful structures, cut out of the rock, and with little or no masonry about them.

Mr. WILLIAM WHITE proposed a vote of thanks to Mr. P'Anson for his paper. From it he gathered that the island of Cyprus had no indigenous architecture, but that the architecture had been wholly imported by the different people who at various periods occupied or passed through the island. He should like to hear more about the eastern door at the Cathedral of Nikosia. It was a remarkable feature, and quite unknown as far as he was aware, in mediæval architecture. He would like to have Mr. P'Anson's opinion as to whether the interior disposition seemed to have been modified by it with reference to the choral arrangement of the sanctuary.

Sir RALPH THOMPSON said he was sorry to state that he knew little about architecture. He had travelled all over Cyprus, and he should say the island was particularly interesting in regard to the architecture. An old castle, a feature of feudal times, had not been noticed by Mr. P'Anson. The island having been once the home of the feudal system, it was peculiar that this castle was almost the only remains of baronial architecture.

Mr. JOHN HEBB said that shortly after the island passed under British administration it had been rumoured that the church of St. Nicolas at Nikosia, one of the interesting groups of French

Gothic churches there, was to be restored and converted into an English church. If that treatment were to befall all the churches in Nikosia and Famagusta, they would meet with a worse fate than those despoiled by the Turks, who only destroyed what was distasteful to their religious views.

Mr. R. PHÉNÉ SPIERS said that Mr. Vacher, whose drawings of Cyprus has been alluded to, must, when studying the architecture in the island, have gone into great detail and acquired a fund of interesting information, and he would no doubt forward what information he could to the Secretary that it might be given in the Transactions.

Professor T. R. SMITH seconded the vote of thanks. He observed that the churches had been referred to as vaulted, but covered by no additional roofing. He would like to know how the vaulting was filled in and the upper surface formed into a roof.

Mr. WOOD said that the roofs were evidently built of solid stone, and, as far as he remembered, the exterior was also finished in stone-work. There was nothing, at any rate, in the way of tiles for a finish. They would see, however, from the sketches he had promised how the roofs were finished.

Mr. EWAN CHRISTIAN, in supporting the resolution, said that the younger members of the profession might well copy the example of Mr. P'Anson, whose enthusiasm was so great that his holidays were devoted to the study of buildings. His Cyprus drawings deserved attention.

The PRESIDENT observed that Sicily, like Cyprus, being contiguous to the mainland, had been occupied in turn by Greeks, Romans, Venetians, the Knights Templars, and later by English. It was richer than Cyprus in Grecian remains, and no doubt had examples of the works of the Mediæval times, of the Crusaders, and earlier still of the Normans, who ranged over all Europe and the Mediterranean; doubtless also there were many works of the time when Guy de Lusignan and his descendants were kings of Cyprus. The President then put the vote to the meeting.

Mr. P'ANSON, in replying, said in reference to the vaulted roofs that he did not know how the haunches were filled in. The houses, as he had before said, were covered with clay and chopped straw, beaten down together. This practically answered all purposes, though, when it did rain, the surface of the roof got sodden and sticky. More recently, he believed, some such composition as pounded brick and lime was used. The haunches were brought up to a tolerably even surface, covered with clay or mud, and slightly sloped. There was a very slight ridge-and-furrow arrangement that drained the water off to a spout. The internal arrangements of the churches seemed to have been left entirely unaltered by the Turks, with this exception, that they smashed up every morsel of stained glass. The eastern door in the cathedral of Nikosia was more modern than the rest of the work, and was constructed of more precious material. All the details showed it to be as good French architecture as any other part of the work. He could not say whether it had been done during the French time of occupation. If done afterwards, it had been done extremely well, and quite in character with the rest. He had had a letter from Mr. Charles Barry saying that a pupil of that gentleman had been, or was about to be, commissioned to restore the cathedral of Famagusta. The building, though dilapidated, was so perfect in every part that any careful architect could restore it. He knew of no other churches that were to be restored. As to the architecture of the islands of Sicily and Cyprus, no doubt there was an analogy, but there was no similarity. When the French occupied Cyprus it was a rich country, and the French were enabled to erect these beautiful buildings, which were purely and distinctively French. In Sicily the buildings were Norman, with an admixture of Byzantine style.

#### SCOTTISH ACADEMY.—LIFE SCHOOL.

THE prizes awarded by the Council of the Royal Scottish Academy for studies of the figure made in the Life School during the last session were presented on the 15th inst. by Sir William Fettes Douglas, P.R.S.A.

The President said—I have lately had occasion to look over the reports of the Royal Scottish Academy from its foundation in 1826 to the present time, and have been both pleased and interested to observe that so many of the prize-holders in its classes have come to the front—have obtained prominent positions in their profession in after-life. This is very satisfactory to the Academy, and inspiring to the prize-holders of to-day. But at the same time there has always been a minority—perhaps a large minority—who never gained any distinction in early life, and yet acquired it gradually in the course of years. The knowledge of this fact may be accepted as a kind of consolation-prize by the disappointed, and not uncheerfully, for hope is often a better stimulant than success. Members of the Academy have often regretted its inability to keep up its life classes for the more advanced students for a longer series of years, as it is thought by many artists, and apparently by most students, that they cannot have too much study from the nude. I am, however, inclined to believe—nay, am convinced—that a very moderate amount of life-class study is sufficient for the education



of most artists; first and principally, because long-continued study in life classes seems to induce a certain laziness of mind, and tends to prevent the proper development of originality and energy. The young artist, after spending under superintendence three or four years in the life classes, should feel that he is now a man, able to think and act for himself; should feel impatient of supervision and mechanical tutelage; eager to think his own thoughts, and work them out his own way. If he has not such feelings, he probably would like very much indeed to drone on, year after year, painting, painting, painting his mind unstimulated, and his hand cramped to monotony, under a master in the life school. From yet another point of view I must consider much or long-continued study in life classes incompatible with true progress. Students there almost invariably slight their extremities. This is sufficiently marked in the studies this year before us. But I do not blame the present students overmuch, because I consider it a vice inseparable from the study of the nude in classes. It would take long to go into the question why this is so, but there is little doubt of the fact. The most distinguished of all students of the nude—William Etty—who studied, or at least painted, in the Royal Academy classes almost to the close of his life, strikingly developed this seemingly inevitable tendency of classes for the nude, his studies ultimately becoming mere lumps of flesh, possessing little but the narrowest sensuous qualities; and the imagination and thought, in which his earlier works were not deficient, became gradually effaced from all his art-work. When the young artist leaves the classes for the nude, he may consider that he has received all the assistance from others others can give him; he has scaffolded his art life, and the question now is, how to build it up? I do not pretend to tell how it is to be done, but this I know, each man must be his own builder. There is no royal road to art, or if there is, it leads only to the half-way house of "dilettanteism"; or its traces are lost in the slough of despond, through which the young artist must struggle as best he may, no man helping or capable of helping him. You have all heard of the land of Cockaigne, of the Island of St. Brandan, of the Isles of the Blessed—

A pleasing land of drowsyhed it was  
Of dreams that wave before the half-shut eye—

a land where no one need work or think, where every wish, though half unformed, was gratified, and roasted partridges flew to the hungry praying to be eaten. This was the land of the poets; but in their wildest imaginings they never fancied aught good or great ever came from or was done in it. Some young artists—so-called—have, it seems, their own land of Cockaigne, a happy place it is, where easels are placed, pallets set, and models are arranged for them; where they have nothing to do but paint, where there is no need for thought or necessity for energy; where industry is but a name and originality unknown; where work lies ready to their hand, and submissive they remain in their tutelage. This is not the fashion in which Nature and their own energy formed great artists. Read the lives of third or fourth-rate men—when they have been written—and you will find a goodly proportion of them were coddled in comfort, and assisted and patted on the head by admiring friends; while the truly great and original struggled and endured, fought and cursed, and reached their ultimate position independently. Artists more than other men seem to require the stimulant of necessity to develop their powers, or rather to enable them to develop their powers; and I do not know an instance of any man lucky in the inheritance "o' world's gear," and while he yet possessed it, ever bending himself continuously to the labour, the weariness, and the disgust invariably attending the thorough and earnest study of art. While I say this, I do not wish to discourage anyone from studying art; it opens up new sources of pleasure in every position in life. But I cannot avoid the conviction that at present it is, as a profession, becoming rather a favourite in the world; and men are putting their children to art as to any other profession or trade, in which they had a reasonable hope of getting them—as the phrase goes—a good connection. This is unfortunate, but it is not all unfortunate; it is a sign that the loaves and fishes are no longer to be numbered in fives and sevens, but are capable of feeding a great multitude. And although the relatively rich mediocrity may sometimes snatch the bread from the very lips of struggling genius, yet it indicates that a wider field has been opened, and richer prizes are in sight, and the young artist may confidently feel that the hope which too often sickened his predecessors in the fight now becomes a tonic, and gives a fillip to his ability and industry. My lungs are not strong enough to pronounce the last word, "industry," with sufficient emphasis, but I look upon it as the best quality the student can possess. If he has ability, it will ripen it; if he has none, it will at least make him respectable if it cannot make him great.

The President then distributed the prizes to the following competitors:—For the best painting from the life (the Chalmers Prize), J. Austen Brown; for the second best, T. Alison and C. K. Robertson, equal. For the best drawing from the life, J. Austen Brown; for the second best, J. Michael Brown. Keith Prize: for the best work of a student in this year's exhibition, R. Noble and H. Raeburn Macbeth. Maclaime Watters' medal, R. Paton Reid. Stuart Prize: first, for picture, J. Michael Brown; second, for alto-

relievo, J. S. Rhind. A statuette of Balfour of Burleigh, by Mr. J. Birnie Rhind, received honourable mention.

Mr. Herdman moved a vote of thanks to the visitors to the Life School.

Mr. Norman Macbeth, in acknowledging the compliment, bore testimony to the industry and uniform good conduct of the students. It was a class involving an immense deal of delicacy; and he thought they were greatly indebted to their worthy curator, Mr. Clark Stanton.

Mr. M'Taggart, in proposing a vote of thanks to the President, said they could not do better than lay to heart what their President had said. In regard to life studies being carried on too long, perhaps, he said, they saw the result of that in the pictures of the Paris Salon. He strongly advocated a careful study of the head, face, hands, and extremities. He thought the nude should be kept apart from the careful and thorough study of these, and remarked that each student in the life class should show in his study that, whether they were elaborate or not, at least that he had an intelligent understanding how to express the extremities. Nothing could be more disagreeable than want of power of expressing those most beautiful parts of the body.

## NEW BUILDINGS IN LEEDS.

THE following criticism on the new buildings in and near Leeds formed part of the address to the Leeds Architectural Society by Mr. J. B. Fraser, F.R.I.B.A., the President:—

The local works executed during the past year are not so numerous nor of such importance as one could have wished, but still they are for the most part creditable to our architects, and in some cases worthy of more consideration than our time will allow.

Firstly, I think Mr. Corson may fairly be congratulated on the near approach of the completion of his handsome block of offices for the Corporation; they are creditable alike to himself and to the town, and I venture further to express a hope that the architect will be allowed (as indeed architects in all cases should be allowed) to direct the design of the minor fittings and the furnishing, so that all may be harmonious and accord with the general scheme of the design.

The only other corporate building in course of erection that I can call to mind is the new Fire Brigade Station, which is not sufficiently far advanced to allow of any opinion being expressed on its merits. On the adjoining site the warehouse for Mr. James Rhodes, designed by Mr. C. F. Wilkinson, is nearing completion, at any rate in so far as the shell of the building is concerned. It is to be regretted that so extensive a building should have its principal elevation to such a narrow street. The fact is, it is impossible to see the front as a whole; for if you stand immediately opposite to it, you only get a general perspective view of the soffits of the openings and drips of the cornices, &c. The prevailing tendency is in the direction of increasing the height of our building premises year by year; and as space for sites gets more costly, I suppose we cannot hope for any modification in that respect. It would be rather a serious matter for the community if the possessor of every site were to be equally aspiring, and indeed in that case we should have to extend the bylaws to regulate the widths of streets and proportionate heights of buildings. The façade appears to me businesslike and substantial, but with no novel or remarkable feature. If I took special exception to any part it would be to the heavy gables with their pedimented tops and ponderous stonework terminals; one cannot help a sensation of uneasiness when passing near such very bold features in a gale of wind.

Last year I expressed a doubt as to the success likely to attend the alteration of the Cookridge Street Baths; I must acknowledge, however, now that they are completed, I am agreeably surprised with the result, which on the whole must be pronounced satisfactory.

The Coliseum in Cookridge Street, designed by Mr. W. Bakewell, is now sufficiently far advanced to allow of, at any rate, a fair idea of the style adopted for the principal front, and to give good promise of something attractive and piquant. The masonry is excellent both in design and execution, and I can assure you that the treatment of the upper portion will be equally satisfactory. The broad masses of plain ashlar walling and the scale of the arched entrance give a breadth and solidity of effect that is often wanting. In Woodhouse Lane a shop has been erected for Mr. Wood, by Mr. Birchall, along with Mr. Hobson. The work is too small to call for extended criticism, but I must mention it as an example of how pleasing an effect may be produced by very simple means when good taste and care are duly exercised.

The erection of the new Baines Memorial Wing of the Yorkshire College has only just been commenced, so that another year at least must elapse before we shall have the opportunity of criticising it. While we cannot perhaps help regretting somewhat that the work was not confided to a Leeds, or at any rate a Yorkshire architect, we have the satisfaction of knowing that in the hands of Mr. Waterhouse it cannot fail to be an addition to the architectural beauties of our town.

I must call your attention for a moment to the temporary Circus, near the New Station, not in order to criticise its architec-



tural features (if it can be said to possess any), or its construction, which I have no doubt is good and adapted for the purpose, but to protest against the erection of so very inflammable a building in the heart of the business part of the town, and actually abutting against valuable property for its entire length, one of the buildings being an important newspaper office. Surely in no other town of equal size and importance would such a thing be tolerated. In and near Swinegate are three small buildings, two inns and business premises, consisting of a block of shops and warehouses. The inns are both designed by Mr. Ambler, evidently with considerable care, the ground-floor storey having the conventional large window and small pilaster treatment; in the case of the "Prince of Wales" an attempt has been made, with decided success, to produce a good effect, but the arrangement of the down pipes has apparently been a difficult problem to solve.

The block of shops by Mr. Corson has a very pleasing elevation of plain, solid-looking character, with good constructional features and a very picturesque treatment of the frontages by the introduction of a circular turret and the arrangement of the angles.

A Mission Room, also designed by Mr. Corson for Messrs. Tetley, in Crown Point Road, while not differing in external appearance from buildings for similar purposes, has been comfortably fitted up, and has a good effect internally. It is also well warmed and ventilated, and the seats are models of comfort.

Another Mission Room of a more permanent type has been erected in Brama Street, from the designs of Messrs. Smith & Tweedale.

S. Hilda's Church at Knostrop, the work of Mr. Micklethwaite, of London, which has been so long in an unfinished state, has at last been opened for divine service. The exterior is by no means equal to churches of the same class designed by our local men, the best feature perhaps being the porch, which, while very simple in design, is good in detail. The interior, however, is well proportioned and handsome, and admirably adapted for preaching. It is the intention of those interested in the church to add at some future day two bays to the nave and a west tower, also to introduce a rood screen; when this is done the internal appearance will be much improved.

One exceptional feature I may mention is the elliptical shape of the nave and chancel boarded ceiling, which appears to clash very painfully with the lines of the windows, but is, I am told, successful acoustically. The font and choir seats are very satisfactory. The arrangements for gas-lighting have a distressing effect, and detract very much from the beauty of the interior.

I noticed with satisfaction the use of chairs instead of fixed benches. Many of our best interiors are spoilt by the close-boarded heavy sittings, the top of the seats, as far as appearance goes, being practically the floor line, and the proportions of the arcades are in many cases ruined by it.

The presbytery now being erected in St. Joseph Street is a marked instance of a picturesque design spoilt by careless and rough work, but in this case I fancy the design is a little too much broken up. We cannot speak in too high terms of the success achieved by Mr. Adams in the Dewsbury Road Board Schools. As an example of what can be done with brickwork of one colour, with only the skilful handling of ordinary rounded and splayed bricks, they are admirable. The roof-line is simple and not spoilt, as is too often the case in similar buildings, by meaningless turrets and eccentric hips and gables; in fact the whole is simple and dignified. The railing is unusually, and I should have thought unnecessarily high; but in these days of athletic and gymnastic culture I suppose the Board find it difficult to keep the aspiring youth to their own territory. The architect has, however, got successfully over the difficulty, and the filling in of the gates is excellent. The Meanwood Schools are more elaborately treated, being in fact like one of the architect's earlier schools near the Hook Memorial Church. The Whitehall Road and Armley Road Schools are not sufficiently far advanced to judge of the design, but I notice that the same simple brick treatment is adopted, and I have no doubt will be equally successful. I have heard occasional grumbling at the sums of money spent on our new schools and on the high school rate, but I am sure if we are to have good substantial and suitable buildings, the difference of cost between absolutely offensive plainness and simple appropriate artistic design would be very small indeed in proportion to the total expenditure, and it may fairly be assumed that a good effect is produced on the children by the character of the buildings in which they are taught from day to day. Another noticeable brick building, also by Messrs. Adams & Kelly, is a very simple mission chapel and school at Campfield. In this case plain square and splayed bricks only are used, and those too of the same make and colour as the general walling, and notwithstanding the very slender means the building is pleasant to the eye, and is not wanting in artistic effect. The dark brick pointed walls inside make the interior a little gloomy, but I suppose motives of economy were pressing. The only private schools that I have noticed are those at Roscoe Place, in connection with the Wesleyan chapel; the planning seems good and the arrangement of classrooms specially commendable. Mr. Danby is the architect.

A well-arranged and picturesque block, comprising chapel with school and lecture-room, &c., for the Unitarian body, designed by

Mr. Connon, is in course of erection in Domestic Street. Special efforts have evidently been made to obtain as much light as possible, and the site has been made the best of. A very excellent life-size figure, executed by Mr. Appleyard, of the celebrated Dr. Priestley, who was formerly minister of this body in Leeds, is to be placed under a canopy in one of the gables.

There seems to be a special dearth of new villas this year; only five came under my notice—one being at Vesper Lane, Kirkstall, of which Mr. Thorpe is architect; one pair at Far Headingley, by Messrs. Perkin & Bulmer; and the others at Wrangthorne, by Messrs. Smith & Tweedale. The former is well planned and comfortable, and has carefully thought-out elevations of Queen Anne character. The villas at Far Headingley are a very successful example of what can be done by judicious treatment of simple materials, and those at Wrangthorne display a careful and good design in brickwork.

The additions to Meanwood Church have been most judiciously made by Mr. Birchall, who had rather a thankless task in harmonising his work with the strange detail of the original building, which, amongst other peculiar features, has the very unsatisfactory one of sham joints on the ashlar of buttresses, &c.

#### COPYRIGHT IN AMERICA.

MR. T. W. CLARKE supplies the following report of the recent attempt to amend the copyright law of the United States:—

The Act was introduced into the Senate by Mr. Hoar early in April, and a few days earlier a duplicate of the Bill was introduced in the House by Mr. Ranney. The Library Committee desired, on consultation, that it be referred to the Patent Committees, and it was so referred. A hearing was had before each committee. It was explained that there was no intention to make anything copyrightable that was not already copyrightable as a "model or design intended to be perfected as a work of the fine arts." Such things were illustrated by the Matzys wrought iron, the Berlin cast iron, the Parisian bronzes, the Sèvres, Dresden, Della Robbia, Limoges, Louzmy, Minton, and Copeland potteries and faïences, the Cellini *repoussé* work, Palissy and Henry III. ware—confessedly works of the fine arts under any definition. Attention was called to the artistic products of this country in faïence, iron, bronze, brass, silver, and plate, by which the houses and households of the country may be and are made beautiful at small cost, and which have been largely imitated abroad in inferior material and execution and sent to this country; and the committee were shown that copyright protection had been taken on many American designs, but that the requirements about marking had resulted either in disfiguring the goods, or that the requisite finish destroyed the marks; and further, that the place where customers and experts looked for marks was on the back or bottom. It was also explained, and the able lawyers of the committee readily saw, that it was intended simply to change the place of marking copyrightable articles. The question of fact, What is a work of the fine arts? would remain where it was before.

It was argued and conceded that all things upon which labour and expense have been bestowed, unnecessary to prepare them for service, but solely to improve their appearance, are broadly to be considered as "works of the fine arts." Modelling, sculpture, carving, architecture, engraving on wood or metal, lithography, painting, printing, bookbinding, cabinet-work, inlaying, repoussé, enamelling, have always been held to be "fine" as distinguished from "industrial" arts, and works of these sorts are subjects of copyright just as music and prints are.

The difference between copyright and design patent for these things has been heretofore, and now is, this: If the work has been published, the author or proprietor can obtain only fourteen years' protection at most under the patent laws. If it is unpublished, he can obtain copyright protection for twenty-eight years with right of renewal. He can take ten copyrights at least for the cost of one patent. Formerly the law gave advantage to the patentee in the matter of marking his goods. Now the patentee and copyrighters are on the same footing in this regard.

The introduction of the Bill was noticed largely in the papers, the hearings before the committees were spoken of, the leading artists, art manufacturers, and dealers took a lively interest in the measure, and corresponded with Congressmen about it. The Senate passed it unanimously. The House suspended the rules at the request of Messrs. Ranney and Ritchie, and with the advocacy of Mr. Cox to allow it to be reported and passed, and probably it was as fully understood as any measure ever before Congress.

But it must always be remembered that the privilege of adjudication on what is and what is not "fine arts" is vested in the Federal Judiciary and nowhere else, and that a postmaster's receipt is as good proof of entry for copyright as the librarian's certificate, so that an assumption of judicial forms by a recording officer in refusing to record can hurt no one but himself. The only quasi-judicial authority of the Librarian of Congress is under Ch. 301, Acts of 1874. He may refuse registration of a print or engraving which is *not* a pictorial illustration or work connected with the fine arts, and prints or labels designed to be used in connection with other articles of manufacture go to the Patent Office.



## NOTES AND COMMENTS.

WHILE popular orators at numerous public meetings throughout Paris are clamouring for the demolition of the partly constructed Cathedral du Sacré-Cœur on the heights of Montmartre, subscriptions towards the completion of the fabric continue to flow in abundantly. The last list, published about a week ago, brings the total to 11,728,685f. (469,147*l.*), and among the later sums received is one of 10,000f. from an anonymous donor, who has already made three previous contributions of like amount. The fact that subscriptions show no sign of falling off must be a welcome surprise to those responsible for the execution of the work, as it was expected that the terrible financial crisis of January, which ruined or crippled so many families of the clerical party, would have materially diminished the receipts. The work is being pushed on with all possible haste.

THE Government of the Nicaraguan Republic have decided upon founding a National School of Art and Manufacture, to be devoted especially, as are those of France, to the higher instruction of foremen and artisans in their various branches of industry, to the training of engineers, and to the superintendence of public works, bridges, canals, roads, railways, &c.; a farming school will be attached for the training of skilled agriculturists. The organisation of the establishment is due to M. A. PETIT-DIDIER, the French Consul-General in Nicaragua, and to M. RONFAUT, a civil engineer, who has been appointed director. Moreover, the whole teaching staff is to be French, and the requisite material has been ordered in France.

THE Académie des Beaux-Arts has elected M. FALGUIÈRES to fill the vacancy caused by the death of M. JOUFFROY in the section of Sculpture. The competitors for the seat were five in number:—MM. FALGUIÈRES, CROUCK, AIMÉ MILLET, BARRAS, and MERCIÉ, and two ballotings took place before the first-named, whose most formidable opponent was M. CROUCK, obtained the absolute majority necessary under the statutes of the Academy. The new member has had a most brilliant career. After gaining the Prix de Rome in 1859, medals in 1864 and 1866, a First-class Medal at the 1867 International Exhibition, and a Medal of Honour in the following year, he was named Knight of the Legion of Honour in 1870. At the 1878 Exhibition he again secured a First-class Medal, and was promoted Officer of the Legion. A few days previous to his election by the Academy the Ecole des Beaux-Arts had conferred upon him a similar honour. It may be noted that M. FALGUIÈRES has not exclusively devoted himself to sculpture, for in the 1875 Salon he carried off a second medal in the section of Painting. His name has for the last twelve months been brought prominently before the public as the designer of the colossal group now surmounting the Arc de Triomphe, where he has erected the plaster model on approval at an expense to himself of 50,000 fr.

For several years past the Luxembourg collection has been threatened by its neighbour the Senate. The Conscript Fathers, who find themselves in very confined quarters in their part of the Palace, seem inclined to turn the magnificent art treasures contained in the public galleries into the street, although at present the State has at its disposal no building suited for their reception. The Senators, however, continue to encroach. One of the principal picture salons has been turned into a committee-room, and a long gallery is used as a means of entrance, with the result that the paintings and statues they contain are withdrawn from public inspection. A few years back similar encroachments on the part of the Upper House elicited a public petition of remonstrance, which—although signed by only 800 persons, the majority of whom, however, bore illustrious and influential names—effected its object. It is to be hoped that a similar movement may speedily be set on foot to save a collection which contains some of the best examples of modern French art from being closed or dispersed.

For some time past the statues in the Tuileries gardens have suffered from wanton acts of vandalism; and among others, FALCONNET'S *Baigneuse*, placed almost in the centre of the reserved garden, has had four fingers of the uplifted right hand knocked off quite recently.

THE Building Bylaws Committee of the Manchester Society of Architects state that they have had several interviews with the Committee of the Manchester and Salford Sanitary Association, and, as the result, a memorial was prepared and forwarded to the Corporation, again urging them to take some steps towards the consolidation and amendment of the building bylaws of the city. The memorial stated that the Society has at different times during the last fourteen years urged this matter upon the Council. A draft of a suggested consolidation of the existing bylaws and other parliamentary powers, with proposed extension thereof, was placed by the Society in the hands of the town clerk as far back as the year 1873. Up to the present time, however, the Society has not succeeded in obtaining the results desired by it, although both the town clerk and the late city surveyor fully admitted their importance. The memorialists are more than ever convinced of the desirableness and necessity of dealing with the bylaws in the manner indicated, and offer to place at the Council's disposal all the information of which they are possessed, and also every assistance within their power.

LAY RECTORS have sometimes extraordinary notions of their powers. In Woodford Halse, in the diocese of Peterborough, the lay rector happens to be a lady. It appears that she lately sent carpenters into the church to alter certain seats in the south side of the chancel, which, at great expense, had been erected by the late lay rector, Sir HENRY DRYDEN, Bart. The direction to the carpenters was to make three square pews of the seats. The men were, however, stopped, but on the following Sunday the lay rector sent labourers to remove two seats, and they did so, though the churchwardens subsequently replaced the seats. In a case of this kind it is difficult to know what to do, for the lady may have been reading some of the laments issued by the Society for the Preservation of Ancient Buildings, and in consequence tried to restore the pews in all their hideousness. The bishop, however, has decided that a lay rector has no right, in virtue of lay rectorship, to interfere with the ornaments or fittings of the fabric of the church, except by means of a faculty granted by the Chancellor of the Diocese in the Consistorial Court; and any person who proceeded with alterations without such an instrument was guilty of a breach of the laws ecclesiastical, and was punishable under such. His lordship asked the churchwardens to inform the lay rector of what he had stated. As the churchwardens are to be answerable to him for the safe custody of the seats, the case may yet come before the Ecclesiastical Courts.

THE picture called *Pomona*, by Mr. MILLAIS, which is now exhibiting in the Haymarket, is remarkable not only for its execution, but for its financial value. It is worth more than any other single figure by the painter. Already it has changed hands more than once. The present owner paid over 2,500*l.* for it, and he has declined to part with it for 3,500*l.*

THE designer of the County Court in Birmingham would seem to believe in what was said by old Bishop HALL—"Wo the State where lawyers flourish"—for he has already caused much illness among the attorneys and officials. It is to be hoped that he has had more mercy on the litigants and witnesses. A local writer says: "It is easy to understand why the business at the new court has to be conducted amidst a universal chattering of teeth and shrugging of shoulders. The ventilator at the top of the building, whenever it is opened, sends down a dreadful draught, which makes every one anxious to have the offending aperture closed again as soon as possible. Then, again, the architect has only provided for a single door at the main entrance to the court, so that the continual opening and shutting makes it extremely uncomfortable for all who have to sit in close proximity to it. But the most remarkable feature of all these thoughtful arrangements is the heating or rather the refrigerating apparatus of the court, which consists of a small fireplace in the neighbourhood of the judge's bench, and a stove near the door. The modicum of heat which proceeds from this limited apparatus is of the mildest kind. Only those, in fact, who consider it dignified and comfortable to sit on the stove can appreciate the warmth at all." Although the court is in this condition, it yields a profit to the State of about 17,000*l.* a year.









INK PHOTO

Sprague & Co. 22, Martins Lane Cannon St. EC

DESIGN FOR THE  
BY GEORGE NATTRASS



125<sup>th</sup> 1882.



KINGS INFIRMARY.

LL TILTMAN, A.R.I.B.A.

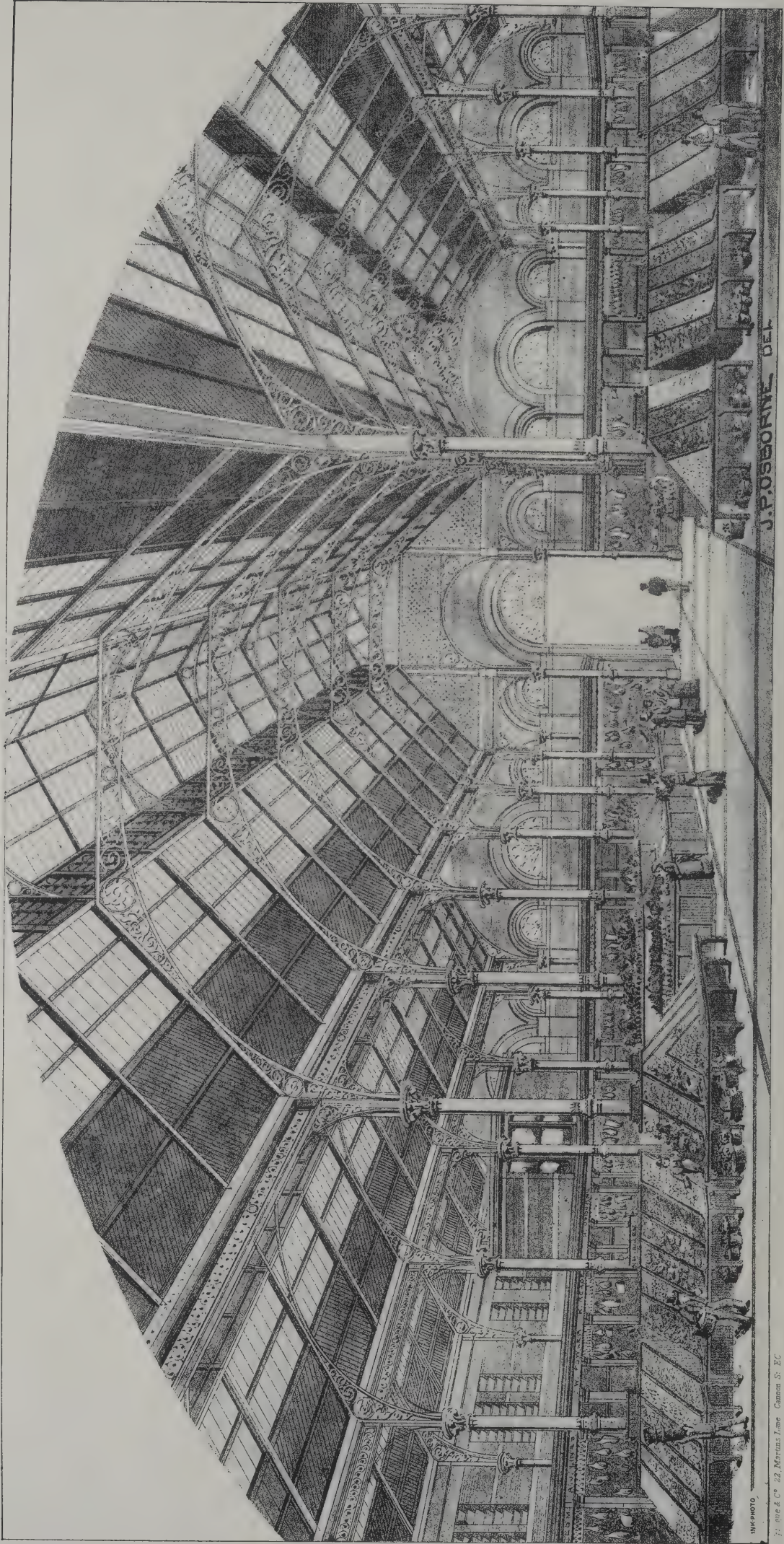












DESIGN FOR MARKETS AT STOKE.  
BY J. P. OSBORNE.

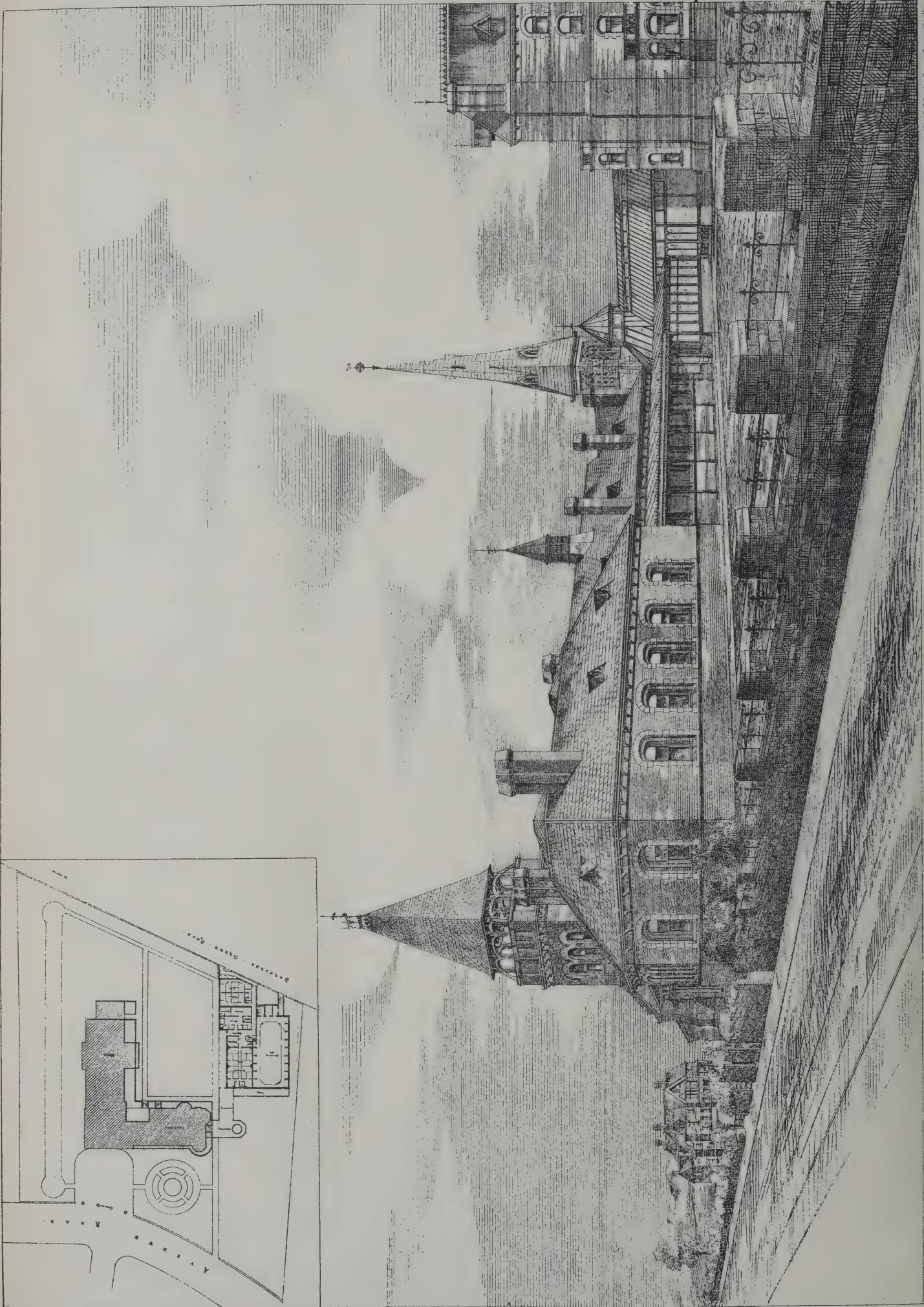
NEW PHOTO

7: 1012 & C<sup>o</sup> 22, Mark Lane, London E.C.









NEW SWIMMING, DROITWICH SALINE AND TREATMENT BATHS  
IN CONNECTION WITH THE IMPERIAL HOTEL, GREAT MALVERN.





DESIGN FOR ST. ANNE'S SCHOOLS, STREATHAM.  
(CENTRAL PART.)

BY M.E. MACARTNEY, ARCHT.









KENT HATCH, WESTERHAM.  
M. E. MACARTNEY ARCHITECT.

M. E. MACARTNEY, M.A. ARCHT.







## ILLUSTRATIONS.

DESIGN FOR THE HASTINGS INFIRMARY.

THIS illustration is a reproduction by the ink-photo process of a water-colour drawing which was submitted in the recent competition.

DESIGN FOR ST. ANNE'S SCHOOLS.

THE drawing of the St. Anne's Schools is the perspective sent in for that competition by Mr. M. E. MACARTNEY and Mr. ERNEST NEWTON.

INGLE NOOK, KENT HATCH, SURREY.

THE view we publish to-day shows Ingle Nook and raised dais of the dining-room at Kent Hatch. An exterior view of the house was published by us on the 4th of this month. The whole of the woodwork is of oak. The ceiling is constructed of thin oak planks in narrow widths, nailed to joists which rest on solid oak girders 12 inches by 12. The architect of this work was Mr. M. E. MACARTNEY, and the contractors Messrs. FOSTER & DICKSEE, of Rugby.

NEW BATH BUILDINGS, MALVERN.

THESE buildings, which are in connection with the Imperial Hotel, are on the eve of completion, and have been erected to give increased hygienic and hydropathic accommodation of a superior character. They are, or will be, fitted up so thoroughly that every class of persons can have any particular kind of bath they may be ordered or feel inclined to take, for here will be found douche baths of every description, running sitz, inhaling, electric, needle, wave, sponge, plunge, &c., &c., in specially-constructed compartments for ladies and gentlemen respectively, with hot and cold water to all; a Turkish bath, with shampooing and other appliances *ad infinitum*, is being constructed, heated, and ventilated on the principles so successfully adopted at St. Stephen's Green, Dublin, and elsewhere.

A very handsome tepid swimming-bath, with water surface 80 feet by 27 feet, has a separate entrance from the town for schools, clubs, &c. The most salient feature of the whole is contained in the fact that saline water from the justly-celebrated Droitwich springs is brought by railway, and "brine" baths are administered at this establishment, under medical supervision, with scientific appliances heretofore unaccomplished in any other establishment in the country.

The buildings, which are of a substantial character, have had very special care bestowed upon them, so as to render them fit for the purpose. The inside walls are lined with white glazed bricks, relieved by coloured bands, &c., which not only give a pleasing appearance, but an assurance of cleanliness of the highest order. The fittings generally are of the very best make and description.

The buildings, except the swimming-bath, have been carried out by Messrs. D. C. JONES & Co., of Gloucester; the heating and engineering work (with some exceptions) by Messrs. T. BRADFORD & Co., of the Crescent Ironworks, Salford, Manchester. The contractor for the swimming-bath was Mr. JOHN INWOOD, of Malvern; the heating of same being done by Messrs. GOODMAN & WARD, of Worcester; the whole being under the supervision of the architect, Mr. HENRY HADDON, Rockliff, Malvern.

DESIGN FOR STOKE-UPON-TRENT MARKET.

THIS illustration is reproduced from a drawing prepared by Mr. JOHN P. OSBORNE, of Birmingham. The walls were to be of brick, with stone dressings; the columns and principals to roof of cast iron; the floor of asphalt; the area, 145 feet by 98 feet; and the estimated cost, exclusive of cellage, 4,000/.

## MANCHESTER ARCHITECTURAL ASSOCIATION.

A MEETING of the members took place on the 21st inst. at the rooms of the Association in the old Town Hall, King Street. There was a good attendance; the principal object of the meeting being to receive an address from the President, Mr. J. Medland Taylor, M.S.A., upon "Some Elements of Success." A hearty vote of thanks to Mr. Taylor for his address was proposed by Mr. Brooke and seconded by Mr. Hodgson; the motion was spoken to and supported by Messrs. Chadwick and Baldwin, and unanimously adopted by the meeting.

## COMANA, IN ASIA MINOR.

A COMMUNICATION from Mr. W. M. Ramsay, who is travelling in Asia Minor, appears in the *Scotsman*, in which he gives the following account of Comana:—

We had looked forward with the greatest interest to seeing Comana, the old religious centre of Cappadocia. If we could learn something definite about this famous old city, a flood of light would be cast on the early history and the ethnology of Asia Minor. Comana occupies a remarkable position in history. It is known to have been the chief sanctuary of the race which transmitted its civilisation and its religion to Western Asia Minor and to Greece in very early time; and it continued to be a great religious centre under the Roman Empire, and the seat of a bishopric in the Christian time. But nothing else was known about it. Its site was deserted after the Turks overran Asia Minor, and for centuries no human being knew where it formerly had been. About twenty years ago the Russian naturalist Tchihatcheff, in exploring the mountains of the Anti-Taurus, came upon its ruins in a lonely glen. Since that time a colony of Armenians had come from Marash, a town fifty miles to the south-east, and built a village among the ruins, and called its name Shahr.

The situation of Comana is very striking. It lies, just as the old traveller Strabo describes it, in a deep glen of the Anti-Taurus, and the river Sarus, still called by the Turks Sarrouz, flows through the city. In the upper part of its course this river Sarus flows straight south through a wide valley. About six miles from Comana the river takes a sudden bend to the west. The wide valley, through which it flowed previously, stretches right away on to the south, and the road to Tarsus, Syria, and the coast goes on down the valley. But the river suddenly sweeps round to the west, and runs straight into the heart of the Anti-Taurus. It winds along among the hills, sometimes with a little meadow by its side, sometimes with the mountains sloping right away up from the water's edge. The mountains are limestone, covered with a scanty sprinkling of soil, and clad with a sparse covering of trees, chiefly fir. Comana occupies the space formed by two links in the winding course of the river. In each of these links a little plateau, one or two hundred feet above the river, is interposed between the water and the mountains, and the city was built on these plateaux, and on a meadow by the water's edge. The city lies 4,750 feet above sea level, and is surrounded by mountains 6,000 to 8,000 feet in height. There are remains of some very large and fine buildings of the Roman period, each built so as to show a front to the river. A theatre was placed on the side of one of the hills, and the long wall of the scene rises right out of the water, while the seats rise in tiers up the hillside. But even the vast buildings of Roman time look dwarfish and small in the narrow valley shut in by the mountains. The scenery is most suggestive of the might and grandeur of nature, and even the Roman Coliseum, if placed here, would only make more evident the comparative insignificance of architecture when placed in opposition to nature's creative power. In a former letter I described the curious rock-sculptures at Ibriz, in the Taurus, which mark another old sanctuary of Cappadocian religion. They are situated at the head of a deep cleft in the mountains, where a good-sized river bursts straight out of the rocks. Several other examples besides these two show that this old Cappadocian religion sought out for its sanctuaries places where the power of Nature was most manifest, and where man seemed placed in the presence and under the influence of God; but of all those sanctuaries that I have seen, not one equals in solemnity and impressiveness the site of Comana. Nature looks now very magnificent, when all the grand Roman buildings are crumbling in ruins; but I believe it would look only more powerful when those buildings were in their perfection, and yet looked small against the mountains.

It is a complete change from the thoughts suggested by the beautiful and solemn ruins of Comana to turn to the people that now inhabit the mountains among which these ruins lie. They are inhabited by a race called Avshahr, whom I have already often mentioned. The Avshahrs are probably the latest race that has come from Turkestan into Asia Minor. Many races have successively gone through the same process; they migrate to the west, and the older immigrants are pushed farther across the country as each new race comes in. You find Yourouks close to the Aegean coast; farther inland various tribes of Turkmens, and away in the east the Avshahrs. Most of them are still half nomadic in their habits; they spend all the fine weather in tents, wandering about the mountains with their flocks. In the winter they return to their village, and spend the cold weather in their huts. In travelling during the summer you often come upon empty villages. Every house stands open, but not a soul is left in the place. There is nothing in the house to take, so that it is needless to fasten the door, and any person is free to use the bare walls if he chooses. The people have all gone off to their summer wanderings. But tent life is impossible in the cold of winter; in the Anti-Taurus mountains the Avshahrs are snowed up in their houses for months together.

These semi-nomadic races have all the virtues of a primitive race of hunters; they are simple, truthful, unambitious, free, and



fearless in their demeanour. But there is little hope that they will readily develop into a useful people for the country. When brought in contact with civilisation, they adopt its vices and lose their own virtues. It is impossible for a savage race suddenly to develop into a civilised. The process, to be healthy, must be slow and gradual, extending over many generations; and you find it actually in process in the country. In many cases you find a new village which has just been permanently founded by a set of nomads. The intermediate stage between the purely nomadic and the settled form of life is when the same community has a winter and a summer village, and migrates regularly twice a year between the two permanent establishments. The nomads gradually become more and more settled; the village grows; a good mosque is built. In this way a community is gradually absorbed in the general population, and loses its distinctness of race. This is the healthy and natural process, but the want of communication and the character of the government throw many difficulties in the way. Even after a settled village has grown up, it retains the original peculiarities and the exclusiveness of the nomadic stage. You recognise the Turkmen village as soon as you enter it; its people never mix with other villages, and know nothing of the outer world. Their blood is as pure and unmixed as if they had never left Turkestan.

Many months before we went into the Anti-Taurus we had heard of a wonderful monument, of which we hoped to be the discoverers. An English officer, one of the travelling Vice-Consuls of Anatolia, heard while he was in these mountains that there was a great stone lion among the mountains, covered all over with inscriptions. He made a note of the village near which this monument was, and we directed our route so as to pass by it. All the people of the country round knew of the "Lion Stone," but when we reached the village the people denied that there was any writing on it. We asked whether it was made by man or was a natural rock, and they said they did not know. Next morning I went to visit the lion. The Consul-General, made wise by many disappointments, declined to climb the mountain; but hope springs eternal in the archaeologist's breast, and I induced my horse to struggle up an almost perpendicular hillside fully 2,000 feet high. We came into a beautiful little valley, green and sunny and cool in the bright July weather, and the guide told us that the "Lion Stone" was before us. Nothing was visible but the limestone rocks of the mountains. The "Lion of the Anti-Taurus" was a mere fiction, the last and greatest of the many disappointments which have mocked my wanderings in Asia Minor. But yet the archaeologist goes off with ever-growing interest to investigate the next monument of which reports reach him. In eleven cases he is disappointed, but the twelfth rewards him for all his troubles.

### HOME SANITATION.

A LECTURE was delivered last week at Chiswick by Mr. H. O. Smith, C.E., late Engineer to the Local Commissioners, on "Home Sanitation." He said—My object in this paper is to give a few hints to those who would have a home free from the sanitary defects that are to be found in many houses, even of recent construction. The word "sanitation" is given as the name of a new science which deals with that branch of the laws of health which includes particularly the method of disposing of the polluted products of the household without harm to the individual or the general public. Its meaning is being enlarged with the growth of the science, and it is used at times to include the general laws of health. Its laws are forcing themselves upon the attention of the world by reason of the disastrous results which have arisen from their neglect. They are binding on every individual, for his own sake, and upon the community, for the mutual protection of its members. Hence the laws made by the latter to protect itself from the neglect of the former. At the present moment there is a tendency on the part of the public to look upon sanitarians as despots and tyrants, because they are asking for powers which carry out their principles to their logical conclusion. It is not my intention, however, to deal with the general question further, and I therefore at once turn to the subject of "Home Sanitation." Its personal interest to each will take away the dryness of the subject.

The first principle in sanitation is to ensure the speedy removal of offensive or polluted matters from the home. It is an essential of life that man shall have for his use matters that are pure and sweet. These he pollutes, and renders dangerous to himself by such use. In the ordinary domestic duties of washing, cleansing, cooking, &c., he turns pure water into a liquid which, when allowed to stagnate, engenders products that are very dangerous to him. The best means of disposing of these claim the first attention of all. The old plan of cesspools on the premises was at one time almost universally adopted. They have been tried and found wanting. They offend the first law of sanitation. A cesspool is simply a hole in the ground, with sides of dry brickwork, into which sewage is made to flow, and from which it escapes by soaking into the surrounding soil. It is the worst system of disposing of sewage imaginable. By its very nature the matters it contains are stagnating in their worst form, and are allowed to pollute the ground for yards round in close soils, and in free soils to an unknown extent. The gases there generated, which are the

worst possible of their kind, cannot escape from the ordinary cesspool by any other means than into the soil or up the house-drains, and the latter affords the readiest way, and the most dangerous. Thus the cesspool returns to the householder its evil products. Yet there are not wanting men of authority who declare that well-constructed cesspools are the best means of dealing with the house drainage. We, as sanitarians, answer that the principle of a cesspool, in that it retains upon the premises sewage matter, is radically wrong, and that the difference between a well-constructed cesspool and a badly-constructed one is a matter of detail only. All cesspools are bad, the only difference being that some are worse than others. Without discussing the merits, or rather the demerits, of the many ways of dealing with house sewage, I will at once state that my experience goes to show that the water-carriage system is the best. By a suitable arrangement of water-tight drains provision can be made for the speedy and effective removal of the whole of the sewage of the house without annoyance, nuisance, or detriment. But there is no doubt that many defects exist in house drains which cause much evil. They should be constructed so as to be water-tight and gas-tight, protected from the sewer by a disconnecting syphon, thoroughly ventilated by air inlets as well as air-outlets, and never taken inside the house. Where these are obtained the evils referred to do not arise. To secure efficient house drainage for this parish, I, as engineer to the Commissioners, drew up the following suggestions:—

In order to prevent as far as possible the evil effects arising from badly designed, constructed, or otherwise inefficient house drains and connections, the Commissioners recommend:—

1st. That the drain-pipe leading from the house to the main sewer should be as short as possible; and (especially in the vicinity of the dwelling or actually under the same) absolutely watertight, constructed of glazed stoneware socket-pipes, with Stanford's patent joint, or jointed with Portland cement, and surrounded with concrete or puddle.

That no house drains should be less than 6 inches in diameter, or have an inclination of less than 1 inch in 10 feet.

No right-angled junction should be permitted under any circumstances whatever.

2nd. That only water-closets should be connected directly to the house drains, and that the soil-pipes from such water-closets should be ventilated by means of a cast-iron or zinc pipe (or other suitable material), at least 3 inches in diameter, leading up outside the house or premises, and above the dormers or other windows.

3rd. That all wastes from sinks, lavatories, overflows from baths, &c., should be tapped underneath, and carried, wherever practicable, outside the houses, and be made to discharge themselves over open sink covers, to gullies or receivers tapped from the house drain.

4th. That means of complete disconnection of the house drain from the main sewer should be employed by an effectual trap and air inlet, the ventilating pipe or opening to the said air inlet to the drain being on the house side of the trap.

NOTE.—By the adoption of the 2nd and 4th recommendations, provision is made for the escape of the foul air from the drain, and for the admission of fresh air to replace the foul air removed. On no account should any trap intervene between the air inlet and the ventilating pipe.

There are drains in the district which have not been constructed in accordance with these suggestions, which are on a satisfactory principle. I refer to the system known as Norman Shaw's, used on the Bedford Park estate. It will be of interest to the members to know that the Commissioners have, after much consideration, framed new bye-laws, in which these suggestions are made law, so that when they come into force they may be insisted upon in their entirety. Where drains are directly connected to the interior of the house, the sewer gases escaping from them often cause disease and death. It is very questionable whether exhalations from drains or sewers can directly cause typhoid fever, which is a typical instance of the class of diseases most effected by them. It has been asserted so in many cases, but not one has ever stood the test of examination. Mr. R. Rawlinson, the Chief Inspector of the Local Government Board, says:—"The philosophy of the question of good drainage seems to be that stinks in the open air do a minimum of injury, but that gases of decomposition within rooms and in stagnant air become dangerous to health." When house drains are badly laid, they are almost as great an evil as cesspools. The duty of seeing them well constructed rests with the local authority of each district; but until local authorities are prepared to appoint more inspectors, the drains will be more or less defective. The perversity of builders in making bad drains is beyond saying. If an absolute guarantee is desired of well-constructed drainage, it is necessary that the inspector should see every pipe laid. To attain this very desirable end more inspectors would have to be appointed. On the question of water supply there is very little to be said, so far as this neighbourhood is concerned, there being but few wells in it. A well is the counterpart of a cesspool, and the risks of its pollution in populated parts are very great. But even in Chiswick, where we are supplied by water-mains, there is cause for serious complaint. The water companies give an intermittent supply only



to the majority of the houses. This causes a supply cistern to be necessary for each house, which is filled when the water supply is on, and from which the supply of the house is drawn. These cisterns are an evil, for even the purest water supplied by the companies contains a small amount of organic and inorganic impurities, which adhere to the sides and bottom, and which, unless constant cleansing is resorted to, will accumulate until they prove a source of danger. It is also to be borne in mind that there are many cases where the service-pipe to the closet is connected directly with the cistern, which is frequently in the scullery, where the atmosphere cannot possibly improve the character of the water.

### THE GROWTH OF PARIS.

A MAP has been prepared by M. Durand Claye, the French Ingénieur-en-Chef des Ponts et Chaussées, representing by means of shading of varying depths the increase of population in the Department of the Seine, proved by the census of December 1881, as compared with that of 1876. It appears that the growth reached its maximum to the north, north-west, and north-east of Paris, the two communes of Colombes and St. Ouen presenting maxima (55 per cent.). There have, indeed, been large building operations between Asnières and Colombes, at Bois-Colombes, and in the plain of St. Ouen. Gennevilliers and Epinay share the movement; and it is interesting to note that the agricultural transformation of the plain of Gennevilliers, by irrigation with sewage-water, has been accompanied by a considerable growth of population in the adjacent communes, and even at Gennevilliers, where it reaches 34 per cent. The poor plateau of Sartrouville, the dry plain of Montesson, and the environs of Achères and of the forest of St. Germain, all in the west and north-west, are conspicuous for a small growth of population. In the environs of Paris, Chatou, Bougival, and La Celle St. Cloud, on the west, present high figures. The growth is also considerable on the east side, except at Romainville. The south and south-east seem less favoured. As to Paris proper, the development is small, *nil*, or even negative in the central arrondissements. All the disposable surface there, indeed, has long been built upon, and the cutting of the Avenue de l'Opéra and the Faubourg St. Germain has even diminished the density of the population in the second and seventh arrondissements. In approaching the fortifications, on the other hand, one meets with growth, this effect being especially sensible in the 17th to the 20th arrondissements, on the north side, and in the 12th and 15th on the south. Montrouge shows 30 per cent.

### DECORATIVE ART.

IN the lecture delivered on Tuesday last by Mr. J. H. Chamberlain, at Birmingham, he told his audience they ought to remember that decorative art, as its name implied, was a subordinate art—that it was the art of decoration applied to something or other, and was not an independent art by itself. He had shown them, and it might be proved by a multitude of examples, that the effect of ideas of beauty, the moment they were entertained, was to exalt and refine the use, and that the effect of them upon the ordinary workman was that he made his work, as far as mere ability went, a great deal better than it was before he began to entertain or understand those ideas, the result being a certain perfection of form, a certain beauty of detail, ending in what the world had long called “proportion.” They could not take anything away from an object thus refined without interfering with its usefulness. In decoration they added something to the object which did not contribute to its use, but at the same time did not take away from the use. This addition was ornament, and consisted either of form, or colour, or an admixture of both. When that ornament was rightly placed so that it was seen to the greatest possible advantage, and when it lifted what it was placed upon out of the range of ordinary handicraftship into art, then, and not until then, ornament became decoration. Recognising that ornament was something added to use, the lecturer said they were on the threshold in the present day of a great danger—namely, an excessive division of labour, wherein one person made the object and another put the ornament to it. The idea of the factory, he contended, was fatal to art; and if there must of necessity be some division of labour, he urged that the decorative artist should not be far removed from the workshop. He must, at any rate, understand what was done in the workshop. Mr. Chamberlain went on to explain how decorative art had suffered from the painter and the sculptor stepping away from it to cultivate their particular arts by themselves. He next spoke in greater detail on the subject of ornament, and pointed out certain considerations bearing upon the question of what was right and wrong in relation to it. Right ornament ought to be derived from, and was that which delighted in, the full development of health, life, and form to the utmost possibility; while he held that to be bad ornament which delighted in deformity and interfered with the full development of life. Right ornament obeyed Nature with respect to any of her laws, while that was wrong ornament which

despised and discarded those laws. The law of growth, represented in various kinds of forms derived from plants, was generally upwards; but this was violated in an ornament which represented a leaf or spray growing both upwards and downwards at the same time, as had been done in thousands of instances. That was bad ornament which was vague and formless, and in which all sorts of ideas were mixed together in a kind of artistic mud. In conclusion, the lecturer explained the true meaning of “conventional” ornament, showing that the material the artist had to decorate frequently forbade a close imitation of Nature, and he was obliged to abstract the more essential features of the natural object from which his ideas were taken. He instanced as a good example the Egyptian porphyry lions in the British Museum, in which, although the hardness of the material allowed but few lines, those which had been used were unmistakably those indicating lion-like majesty, strength, and repose. It is much easier to carve a block of wood or soft stone with an actual representation of a group of hawthorn leaves than it was to abstract from them the quintessence of their character and arrange them in an ornamental or decorative form. In his next and final lecture Mr. Chamberlain promised to say something about one or two practical methods which art students ought at any rate to know in order to give themselves facility in attempting to design.

### GREEK PAINTING.

THE second lecture of Professor Newton's course at University College on Ancient Greek Painting treated of the painters who followed Polygnotus, between B.C. 430 and B.C. 336. The first of these in order of time was Apollodorus, who was the first to represent the effects of light on the local colour, and thus painted objects as they seemed to the eye, discarding the conventionalities of the earliest styles. He was followed and surpassed in this new development by Zeuxis, who is said to have reduced *chiaroscuro* to a system. According to Lucian he was distinguished for daring invention of new and fantastic forms. His most celebrated pictures were a group of male and female Centaurs graphically described by Lucian; his *Helen*, painted at Crotona, for the temple of Juno Lacinia; and his *Hercules Strangling the Snakes in his Cradle*. He also painted the house of Archelaus, King of Macedon. He rose to such celebrity that he became rich enough to give his pictures away, and appeared at Olympia with his name embroidered in letters of gold over his mantle. It may be inferred, from all that we are told of Zeuxis, that, in representing gods, he did not try, like Polygnotus, to awaken religious or ethical associations so much as to please the eye by beautiful form and attractive colouring, and by daring invention of new types and combinations. In his mythical personages he sacrificed their ethical character to the dramatic situation in which they were introduced. In this respect his innovations in the treatment of myths may be compared to those introduced by Euripides in tragedy. His great contemporary, Parrhasius, was a native of Ephesus. He excelled, we were told, in refinement of drawing; above all, in the outlines of form. In the treatment of the hair, the mouth, and the expression he was greatly admired. Among his most celebrated works was an ideal portrait of the Athenian Demos, in which he appears to have expressed or suggested the combination of many characteristic qualities or moods, some of which seem hardly compatible with the others. Like Zeuxis, Parrhasius was exceedingly arrogant, showing Asiatic luxury in his dress and manners. In his picture representing the contest of Ulysses and Ajax for the armour of Achilles he competed with his contemporary Timanthes, but failed to get the prize, on which, in his indignation, he compared his case to that of Ajax, whose rival was unjustly preferred. The most celebrated work of Timanthes was the *Sacrifice of Iphigenia*, in which, after having represented various phases and tokens of grief in the spectators, the painter introduced, by way of climax, Agamemnon veiling his head, as if a father's grief should be left to the imagination. Parrhasius and Zeuxis represented what the ancients called the Asiatic or Ionic school of painters. Eupompus founded at Sicyon another celebrated school. To this Sicyonian school belonged Pamphilus and Pausias. Pamphilus, like Leonardo da Vinci, was a learned artist, studied arithmetic and geometry, and taught drawing, charging at the rate of about 20*l.* a year for twelve years. From his time drawing became a part of a liberal education in Greece. Among his pupils was Apelles. The Sicyonian school was greatly praised by Plutarch. His pupil, Pausias, seemed to have perfected encaustic painting, which, like the invention of oil-painting in the fifteenth century, must have given richness and depth to colouring. Pausias painted a bull, which was thought a masterpiece of foreshortening. He applied his encaustic painting to ceilings and also to the painting of flowers. A third school of painters arose at Thebes. The most celebrated of these were Aristides, Euphranor, and Nicias. Aristides, though harsh in colouring, seems to have been a great master of dramatic expression. His *Dying Mother and Child*, an incident at a siege, seems to have been, like the contemporary statuary group of *Niobe and her Children*, by Praxiteles, a masterpiece of pathos. Aristides painted also a battle with Persians, in which



there were 100 figures. He is said to have been paid at the rate of about 40*l.* for each figure. Euphranor, who was also great as a sculptor, was a learned and laborious painter, who painted the twelve gods, a battle scene, and the feigned madness of Ulysses. He seems to have further developed historical painting. Nicias, like Polygnotus, painted the *Descent into Hades*, *Perseus and Andromeda*, and various mythical heroines. He was said to have been a great master of *chiaroscuro*. In conclusion, the lecturer stated that the characteristics which distinguished these several painters were very difficult to be made out from the meagre notices in Pliny and other ancient authors. In some cases it has been assumed by Brunn that descriptions of some of the most esteemed works of the great masters might be recognised in Philostratus, but this was an hypothesis not capable of proof, and therefore not too strongly to be relied on.

### THE ROYAL SCOTTISH ACADEMY.

THE fifty-fifth annual report of the Royal Scottish Academy has been issued. It states that the last exhibition contained 1,017 paintings in oil and water-colour, and 28 works in sculpture, selected out of a total of 2,475 works of art sent for exhibition. The attendance of visitors was good, being, in comparison with several past years, fairly an average. The past year has been marked by the losses sustained in the deaths of the president, two honorary members, and an associate. As a mark of respect to their recently-deceased president, Sir Daniel Macnee, it was resolved to dispense with the annual dinner given prior to the opening of the exhibition.

At the statutory meeting of the Academicians held on February 10, Mr. Robert Gibb was duly elected an Academician to fill the vacancy caused by the death of the late secretary, Mr. William Brodie, R.S.A. This election, along with the vacancies which occurred by the resignation of Mr. John MacWhirter, A.R.A., and the death of Mr. John Crawford Wintour, A.R.S.A., caused three vacancies in the rank of Associate. On February 10 next the Academy will be called upon to elect an Academician in place of Sir Daniel Macnee. At the general assembly held on April 14 it was unanimously resolved to transmit to the Queen a congratulatory address, humbly expressing the thankfulness of the Academy at the providential escape her Majesty had made from the recent attempt on her life. At the same meeting, on the motion of the President, Mr. John MacWhirter, A.R.A., who had resigned his associateship, was unanimously elected an honorary member. The librarian and curators of the library report that there has been an average attendance of the members in the library during the past session. The librarian has classified and arranged, in 10 vols. folio, 900 of the curious and valuable collection of drawings bequeathed to the Academy by the late David Laing, LL.D., Honorary Professor of Ancient History to the Academy. A large number of books, prints, &c., have been added to the library. The visitors of the Life School report favourably with regard to the progress made, and the healthy state of work produced, by those attending during the session; and also bear testimony to the diligence and good conduct of each student. The session of 1881-82 commenced on November 7 and ended June 30, the average attendance being thirteen per night. The morning class commenced November 8 and ended July 3, the average being eleven. The Council are glad to observe the generally high quality of the students' work, and are also gratified to find that the Stuart Prize has on this occasion called forth more earnest and varied effort than for several years past. It is with much pleasure that the Council again record the liberality of Mr. John Leng, of Kinbrae, whose warm interest in extending the education of the students of the Life School the Academy cordially appreciates. The recipient of Mr. Leng's prize this year is Mr. J. Coutts Michie, who is at present availing himself of the opportunity thus generously afforded him by travelling and studying on the Continent. The collection of works of art, &c., belonging to the Academy has received the following additions during the past year, viz.:—*The Sea King*, diploma work of Mr. Robert Gibb, R.S.A.; cabinet portrait of Mr. W. L. Leitch, painted by Robert Scott Lauder, R.S.A.; study in chalk of an ecclesiastic, by Annibale Caracci—these two latter works presented by Sir William Fettes Douglas, P.R.S.A.; "Herculanéum et Pompei: Recueil général des Peintures, Bronzes, Mosaïques," &c., presented by Mr. John R. Findlay; "Ten Proofs of Illustrations to Charles St. John's Natural History and Sport in Moray," presented by Mr. George Reid, R.S.A.; "Memoir of the late Andrew Jervise, Esq., F.S.A. Scot.," presented by Mr. John Hutchison, R.S.A.; "The Life and Works of Thomas Bewick," presented by the author, Mr. David Croal Thomson. A legacy of 100*l.* has been bequeathed to the general funds of the Academy by the late Mr. W. T. Sinclair, of London. The unconditional character of this legacy, the first which has been thus placed at the free disposal of the Academy, cannot but be viewed with satisfaction. Intimation was made in the report for 1878 of a bequest by the late Mr. Andrew Jervise, F.S.A., Brechin, to endow a prize for the most deserving student or students of the Academy. An interim payment of 150*l.* to account has been received, pending a further sum to be paid when

the residue of the estate shall have been fully realised. Until this shall be declared, however, the Council refrain from carrying out in a partial manner the terms of the bequest. The opportunity which occurred at the close of the past year, after the completion of the cleaning and repainting of the galleries, was taken advantage of to thoroughly inspect, clean, and rearrange the Academy's collection of works of art deposited in the National Gallery, library, council-room, and vestibule. As a fitting sequence to this, a printed catalogue of all the works of art in the possession of the Academy is in preparation, and will shortly be placed in the hands of members. The report proceeds to refer to the death of Sir D. Macnee, and states that at the general assembly of the Academy on January 24 the following minute was adopted:—"The members of the Academy desire to place on record their sense of the heavy loss sustained by the body in the death on the 17th inst. of its venerable and esteemed President, Sir Daniel Macnee, whose eminence in the branch of art which he professed, whose urbane and equable temper in the chair, and whose active interest in all that concerned the welfare of the Academy and the general progress of art, had won for him the respect and confidence of the whole academic body, and of every member of the profession in Scotland. But it is not as their President only that they deplore the loss of Sir Daniel Macnee. His rare geniality of nature, his wide sympathies, and the unwavering kindness which characterised his intercourse with his brethren, made him no less beloved as a man, and his removal from amongst them all regard with a deep sense of personal loss." A brief notice of Sir Daniel's career is then given, and the Council give the terms of a letter in which the Queen's regret on hearing of his death was expressed. The report next alludes to the death of W. Miller, honorary member of the Academy, in regard to whom the following minute was adopted on January 24:—"The general assembly desire to record their sincere regret for the loss of a member of the Academy so much beloved as a man and so highly esteemed as a citizen, and who, at a time when Scotland had but begun to assert its position in the republic of art, had achieved a pre-eminent and widely-recognised place amongst British engravers." A notice of Mr. Miller is given; and it is stated that, at the same meeting, the Academy recorded their sense of the loss which art had sustained by the death of Mr. John Linnell, also an honorary member. The death of Mr. J. C. Wintour, A.R.S.A., is next alluded to, the Council remarking that his name may well claim an honourable place on the roll of Scottish landscape painters. The report proceeds to say that a general assembly was held on January 30 to elect a successor to the chair of the President, and Mr. William Fettes Douglas, R.S.A., was elected to be the head of the Academy. The secretary was thereupon instructed, in acknowledging the receipt of her Majesty's gracious reply to the intimation of the death of Sir Daniel Macnee, to communicate the election of Mr. Douglas as his successor. In reply, a letter was received signifying her Majesty's approval of the selection. In further testimony of Royal approval of the choice made by the Academy, her Majesty graciously conferred the honour of knighthood on the President at Windsor Castle on May 17.

### GLASGOW ARCHÆOLOGICAL SOCIETY.

THE twenty-sixth annual general meeting of the Glasgow Archæological Society was held last week in the rooms of the Society, Bath Street. Professor Lindsay presided.

The report by the council for the past session states that in every way the Society has during the last twelve months made gratifying progress, and it has been conclusively shown that the Society has only required opportunity to claim for archæological research its proper place in the West of Scotland. The Marquis of Bute, who has throughout shown very great interest in the Society, has intimated that he will defray the cost of publication of Mr. Anderson's paper on Paisley Abbey, which will therefore, with illustrative drawings and photographs, be presented to the members by Lord Bute as an extra publication. The council regret that Mr. George Watson and Mr. Cluny Macpherson, both members of the Society, have been removed by death since last report. During last session—i.e. to April 20, 1882—fifty-four new members were admitted, this large increase justifying the confidence last year expressed that the number of members would very considerably be enlarged as the work of the Society became better known. The council have throughout the past year received and considered many suggestions and proposals with a view to the organisation of research in the city of Glasgow and the counties of Lanark, Renfrew, Dumbarton, Argyle, and Bute. A further proposal for enlisting the aid of the parish clergy throughout the country by their enrolment as honorary corresponding members is still under the consideration of the council. The council recommend the re-election of the vice-presidents, and the reappointment of the honorary secretaries and honorary treasurer. To fill the four vacancies in the council (under the provisions of rule 4), the council would suggest the re-election of Professor Robertson, Mr. Guild, and Mr. St. John V. Day, and the election of Mr. R. W. Cochran-Patrick, M.P. The council again congratulate the members upon the satisfactory state of the Society's finances.



Mr. Joseph Irving read a paper on the subject of "Philosophy in the Study of Things Old." He said it was difficult to define when an object became antiquarian. In illustration of this statement he referred to the address of Principal Caird at the opening of the University, and remarked that they had all been astonished to learn that Bishop Butler might be classed among the antiquaries of this world, and that the great "Analogy" itself was only a sort of survival of the fierce theological disputes of the last century. This showed how difficult it was to tell when a thing was old enough to be considered an antiquity, and when it was fresh enough to be considered something new. Speaking, in passing, of the Hamilton Palace treasures, he said he did not care for the dispersion of the pictures, jewels, and works of art; but the disposal of the national papers, of which there were more than 300 at the palace, he characterised as a disgrace, and, as Mr. Cochran-Patrick had said, this country ought to have had the option of purchasing them.

In the course of the conversation which followed the reading of the paper the belief was expressed that the better portion of the Hamilton manuscripts were still in this country. Very valuable works, no doubt, had gone abroad, but those relating particularly to Scotland were still retained.

### ORDNANCE SURVEY OF SCOTLAND.

THE Ordnance Survey of Scotland, including the adjacent islands, which has been going on for the last thirty-seven years, has now been entirely completed. The Edinburgh division of the surveying staff, which has been stationed in the city for thirty-two years, leaves for Clifton, where it will be located with a view to work in the western counties of England and South Wales. This division has been for over five years under the command of Captain Kirkwood, of the Royal Engineers, who, with the headquarters of the 13th Company R.E., moves south with the division. For the purposes of the survey Scotland was divided into three sections; and during the last few years from eighty to ninety men, on an average, have been employed upon the work. The superintendents of the survey were officers of the Royal Engineers, but the bulk of the surveyors were civil assistants. With the exception of the counties of Edinburgh, Kirkcudbright, Wigtown, Haddington, and Fife, which were surveyed and published on the 6-inch scale before the larger scale was adopted, the whole of the agricultural districts have been surveyed, and the results are now published, on the scale of 1-2500, or about 25 inches to a mile. The plans on this scale give a number to every enclosure, of whatever size or nature—this number having reference to the area book, also published by the Ordnance Survey—of the parish to which the enclosure is situated. In this book is given the actual area of each enclosure, and these areas being totalled at the end, the actual acreage of each parish is shown. The total acreage in each parish is also detailed under the respective heads of land, public roads, and water. These maps have proved of the very greatest use to the public, particularly in all questions of land transfer, where they are unhesitatingly accepted by the Law Courts. Towns, &c., are done on the scale of 10 feet and 5 feet to a mile, and show even the lamp-posts on the streets. The uncultivated districts of the Highlands and Islands are done on the 6-inch scale—the publication of the island portions, by the more rapid process of zincography, being now quite completed. In these maps the height of every hill is given, and its contour drawn; and, as showing the careful nature of this important work, it may be mentioned that all antiquities are noted, and, by the employment of different styles of lettering, their Roman, Druidical, Saxon, or Norman character indicated. The engraving of the 1-inch general map, which, from the nature of the processes employed, is necessarily much slower, is now proceeding apace, and the sheets are being quickly published.

### THE ELECTRIC LIGHTING ACT.

THE following resolution was passed at an adjourned Conference of Local Authorities held in Birmingham:—After hearing the report of the deputation to the Board of Trade, and considering the position of local authorities both as regards the interest of the ratepayers in the event of such authorities themselves working the electric light, and in the event of its being worked by trading companies, this conference is of opinion that the science of lighting by electricity is not yet sufficiently developed to justify local authorities expending the ratepayers' moneys in becoming undertakers for the supply of the light; but that every facility should be given by local authorities to trading companies to enable them to develop and work the discovery, and that local authorities should content themselves by making proper provisions for the protection of the ratepayers in regard to the following amongst other points:—1. Retaining full control of the streets. 2. Suitable situation of the works, so as to secure freedom from danger, nuisance, or annoyance to the inhabitants in the immediate neighbourhood. 3. Regulations as to the wires and lamps, so as to secure freedom from danger. 4. Supply at reasonable prices. 5. The right of purchase by the authorities from the undertakers

at a shorter period (if possible) than that provided for by the Act. 6. To endeavour to limit the area over which provisional orders are granted, so as to confine it within such reasonable limits as will enable the local authority to purchase the undertaking with facility, and not have cast upon the ratepayers the burden of purchasing the monopoly over a large and extended area, and also so as to permit co-existent experiments to be made by other companies in other parts of the districts, providing an authority decides to concur in the grant of provisional orders to competing companies. 7. To secure from time to time on the board of management of the electric lighting company direct representation for the ratepayers, by stipulating that at least two members of the local authority shall be *ex-officio* members of such board of management."

### THE EMPLOYERS' LIABILITY ACT.

SOME cases have been heard during the week in the Queen's Bench Division which arose under the Employers' Liability Act. In *Moore v. Shaw* the plaintiff was the widow of a workman killed by a fall from a scaffold at the new church of the Oratory at Brompton. The action was brought against the contractor under the Act. His defence was that it was not an accident arising from "any defect in the condition of the way, plant, or machinery." The case was tried at the Westminster County Court, and it appeared that the man had not gone on the way provided and intended for the use of the workmen, but had gone on another part of the scaffolding, between which and the secure part was a gap, in stepping across which he stepped on a "putlog," which gave way and he fell and was killed. The Judge decided in favour of the widow, who obtained a verdict and judgment for 275*l*.

Counsel moved on the part of the contractor to set aside the verdict, as given against the evidence, and also as grounded on an erroneous view of the meaning and application of the provision in the Act as to a defect in the condition of the "way." He urged that in truth the accident had arisen from the man's misuse of the part of the scaffolding on which he had gone and of the "putlog."

The Court granted a rule *nisi*.

The case of *Bevan v. Trow* involved the relative liability of contractors and sub-contractors. The defendant is a builder, who had contracted to repair the roof of a church at Walsall, and he had contracted with one Williams to find labour for the work for the sum of 66*l*., Trow finding plant and material. Trow's foreman told Williams that he (the foreman) would send him proper tackle, but Williams did not wait for it, and himself chose a chain which turned out to be bad. After that the foreman told the plaintiff, a labourer, "to go and work for Williams," and he went, and while engaged in work at the church he sustained an injury through the breaking of a chain which had been chosen by Williams. The plaintiff sued Trow, the builder, for the consequences of the accident, and the question was whether he was responsible for it. The County Court Judge found, as a fact, that the plaintiff was in the service of Trow, the defendant, and that Williams had been negligent in choosing the chain, which had not been tested and was defective in strength, and so he gave his judgment for the plaintiff for 60*l*.. The question now raised was whether that judgment could be supported in law or on the evidence.

The Court said that no doubt the plaintiff was in the service of the defendant Trow, but if Trow was liable in this case it would certainly be hard upon him and a very extreme application of the law, for it appeared that his foreman had offered to supply the proper tackle, and that Williams did not wait, and took it upon himself to choose a chain which turned out to be bad. There appeared, however, to be obscurity as to the facts with reference to the relations subsisting between Trow and Williams, and so they sent the case to the Judge to have the facts on that point more clearly ascertained.

In Scotland an action has been brought against a building owner. The widow of a labourer sued Robert Taylor, shipowner and coalmaster, for 500*l*. in name of damages, on the ground that he is responsible for the death of her husband. Fenton was in the employment of Messrs. Lawson & Son, builders, Newburgh, who were erecting a factory for the defender; and in September of last year, while he was removing some battens which had been used in the construction of the gable wall, the upper part gave way and fell upon him. It was sought to hold defender liable, in respect he made several alterations on the construction of the factory, which had destroyed its stability, and, further, that he supplied defective material in the shape of bricks. Defender denied fault, and pleaded that, having employed competent contractors, he was not liable.

Lord Adam, in summing up, said the jury could have no doubt that the husband of the pursuer met his injuries in consequence of fault on the part of Taylor or of the Lawsons. Whatever fault there might be with the latter, if the jury were of opinion that the defender had contributed in an essential and material degree to the fall of the gable, they were perfectly entitled to find him liable



in damages. No doubt the defender used due caution in employing responsible contractors; but the question was, whether there was such interference, such giving of orders, on his part that he must be regarded as being responsible. He undertook to supply material, and he was bound to supply it of suitable quality, and the fault of the contractors in using unsuitable material would not relieve the proprietor of the consequences of supplying it. In law, his Lordship laid it down, the defender was responsible; but before concluding he mentioned to the jury that though the pursuer had two children depending on her, they could bring separate actions for damages.

The jury returned a verdict for the pursuer, and assessed damages at 300*l*.

### THE MANCHESTER SHIP CANAL.

THE Parliamentary notices for this undertaking have been issued. The promoters ask for leave to introduce a Bill for the following amongst other purposes, namely:—To enable them to incorporate a company to whom shall be transferred all or some of the easements, rights, powers, &c., of the Mersey and Irwell Navigation Company, and of the Bridgewater Navigation Company, Limited, so far as the same "relate to the maintaining, improving, and keeping navigable the rivers Mersey and Irwell between Hunt's Bank in Manchester and Liverpool"; also the branch canals connected therewith; and all the estate, rights (including the right to levy tolls), powers, &c., of the said proprietors and company in or over the the said river and waterways. Power is sought to enable the new company to acquire, either by virtue of their Bill or by subsequent contracts and agreements thereunder, the undertakings, or any part of the undertakings, known as the Duke of Bridgewater's Canals, the Runcorn and Weston Canal, and the Manchester and Salford Junction Canal, with their branches; and all lands, warehouses, wharves, &c., thereto belonging. Further power is sought to enable the company in the counties of Lancaster and Chester to construct a ship canal navigable to Manchester, and for that purpose to exercise certain powers, including the dredging, &c., of the navigable channel below Runcorn; the dredging, widening, &c., of the Mersey and Irwell up to Manchester; and the construction of a new navigable channel between certain points specified, with a dock in Salford, to be constructed partly on lands the property of the Manchester Racecourse Company, Limited, and partly on lands adjoining thereto, all which lands are included between the river Irwell, Cross Lane, the northern boundary of the racecourse, and the Salford Cemetery. Besides the great works above specified, power is sought for the construction of certain necessary conduits, locks, weirs, culverts, &c. The difficulty of the railway bridge at Walton, near Warrington, is to be met by the diversion of the main lines of the London and North-Western and the Birkenhead, Lancashire and Cheshire Junction Railways, and the carrying those lines over the river by a high-level bridge. The Warrington and Stockport Railway and the railway of the Cheshire Lines Committee at the points where they intersect the proposed ship canal are to be similarly treated. Due provision is to be made in the bill for the levying of tolls, the making of bylaws, and all other things necessary; and it is also sought to empower municipal corporations and local authorities in the counties of Lancaster and Chester "to apply their respective corporate funds, and to borrow further moneys by mortgage, debenture stock, or annuities," for certain specified objects, including the holding of shares in the capital of the Company; such local authorities to have power to nominate and appoint directors. Provision will be made for the transfer to a body of trustees or commissioners of the undertaking, rights, privileges, &c., of the Company, in such circumstances and upon such terms and conditions as may be prescribed by Parliament.

At the meeting of a Committee of the Manchester City Council which was held on Monday, Alderman Harwood said he trusted that the Parliamentary Sub-Committee would report as early as possible on the canal scheme. At present some members of the committee were placed in a rather awkward position, as, although favourable to the scheme as a whole, they might possibly have to oppose the private bill now being pushed forward by the promoters. He was quite certain, from the discussions which had taken place in the Council chamber on previous occasions, that the Council would not be prepared to allow a private bill in that form to pass. Whenever this bill was obtained, the undertaking must be either in the form of a public trust or such as to enable it ultimately to assume that form, because he was convinced that a private company could not succeed. He thought it would be well if the mayor were to convene a meeting of the mayors of Oldham, Bolton, and other towns interested in the Ship Canal scheme, and confer with them as to the desirability of the corporations doing in this matter what the various nations did in regard to the Suez Canal. They were empowered then to take shares to a certain amount, and it seemed to him that the corporations now affected might take shares in the ship canal to a limited extent, and thus encourage the scheme and

secure its success. It was desirable that the Mayor should have the discretion to spend such money as was necessary for this object, so that the people outside who were pushing the scheme might know that the Corporation were thoroughly in sympathy with the movement. He proposed—"That the Mayor be respectfully requested to make such arrangements and incur such expense as he may think desirable for the purpose of ascertaining the views of and conferring with the mayors and other representatives of municipalities and local authorities affected by the proposed ship canal."

Mr. Stewart seconded the resolution. He said the bill as framed by the promoters included powers enabling corporations to contribute to the capital of the undertaking. Supposing that the Manchester Corporation were to subscribe a million of the capital proposed, the liability on that would not amount to more than 2*d*. in the pound on the ratable value of Manchester, and the benefit which would be derived by the city from the establishment of the canal would be vastly in excess of 2*d*. in the pound.

The resolution was carried.

### EXCAVATIONS AT EPHEBUS.

A MEETING took place on Saturday afternoon in the theatre of the South Kensington Museum for the purpose of promoting the resumption of the excavations at Ephesus on the site of the Temple of Diana, by Mr. J. T. Wood. Presumably in consequence of the review of the troops, so small a number of visitors were present that it was decided not to attempt the transaction of any formal business on that occasion, but to call a further meeting at a subsequent date, and a notice to that effect was given by Professor T. Hayter Lewis. To prevent the complete disappointment of the few who had assembled Mr. Wood gave a short account of the excavations already made by him at Ephesus. He explained that the object of the meeting that day, had it been successful, was to obtain sufficient subscriptions to clear the outer court of the temple, a labour which would cost 5,000*l*., and would, he estimated, yield at least 20,000*l*. worth of frieze. Professor Newton, addressing the meeting, expressed a hope that the money required would be forthcoming, and the proceedings soon afterwards closed.

### METAL AND WIRE GAUGES.

THE report of the trade upon the proceedings under the Weights and Measures Act, 1878, has the following remarks:—

On the subject of standard metal and wire gauges the report says:—In the last report it was stated that the Board had accepted an offer made by Sir Joseph Whitworth to deposit at the Standards Office sets of his well-known external and internal gauges. Such gauges were consequently so deposited, and they were subsequently verified and approved as Board of Trade standards by an Order in Council, August 26, 1881. In a circular communication, dated October 23, 1881, this Department called the attention of all local authorities to these standards, and pointed out that with a view of promoting accuracy in workmanship, and of preventing disputes as to sizes, it appeared desirable that all gauges used by engineers, manufacturers, and others should be made to agree with the standards. In consequence of representations made to this Board by Chambers of Commerce and others as to the loss and inconvenience which also arises from the variety of sizes of wire gauges now in use in trade, the question of legalising a standard wire gauge is under consideration.

The attention of this Department has also been recently called to the want of a standard system of screw threads. Although in large screws, such as those used in the ordinary operations of engineering and carpentry, the want of a uniform system of screw threads has been practically overcome without legislative intervention, by the gradual adoption by manufacturers of the Whitworth system of threads, it would appear that in many manufactures where screws of a less size are used, particularly in the construction of scientific and optical instruments and in the watch trade, the variety of threads now in use by different makers leads to inconvenience and increased cost of production. The consideration which is now being given to this important question by those practically interested may, it is hoped, result in the adoption of a standard system of screw threads applicable to the requirements of all manufactures.

**Malvern.**—Radnor House, the residence of Mr. C. D. Barker, has been altered and enlarged by the addition of new dining-room and billiard-room, principal and secondary staircases, young ladies' room and bedrooms, servants' offices, &c., at a cost of between 3,000*l*. and 4,000*l*. Mr. E. W. Elmslie is the architect, and the work has been carried out by Mr. Everall, builder, of Malvern, Mr. W. H. Sheppard, being clerk of works.



## LEGAL.

## Queen's Bench Division.

Before Mr. Justice FIELD and Mr. Justice STEPHEN.

THE LONDON, CHATHAM, AND DOVER RAILWAY COMPANY  
v. BULL AND FRANCIS.

This was a case of some interest to purchasers of land, as illustrating the obligations and restrictions to which they may become subjected. In 1867 the company sold to one Quatermass a piece of land adjoining the railway at Penge, with a covenant from him and his assignees not to build within 10 feet of the railway. He conveyed to one Hobday, whose conveyance disclosed, by reference to the title-deed under which he purchased, the restrictive covenant in the company's conveyance, and which he might have known of so as to affect him by what is called "constructive" notice of it, although he had no actual notice of it. Hobday had erected the Alexandra Tavern on the land, and part of the building he erected was within 10 feet of the railway. He did not ask their leave, nor did they, on the other hand, interfere. In 1871 he let the tavern, taking a covenant not to make any alteration on the premises without his leave. In February 1879 his lessee assigned the premises to one Francis (one of the defendants) for the residue of the term, subject to the covenants in the lease. Hobday died in December 1879, having devised the premises to Bull (the other defendant), his executor, in trust. In March 1881, the sub-lessee, Francis, commenced certain building operations at the Alexandra Tavern, being "alterations and additions," obtaining from Bull, the lessee's executor, a licence, for which he was paid 52*l.*, and under that licence the sub-lessee, Francis, erected a building within 10 feet of the railway, and of a greater height than the building already erected by Hobday, the first purchaser's assignee. The company did not interfere until April 1881, when the new building was nearly completed. They now contended that the building was a breach of the contract, and claimed damages and a "mandatory injunction" to pull the new building down.

The counsel for the defendant strenuously contended that, whatever might have been originally the obligation on the ultimate assignee, the company were now too late to take advantage of it, having "stood by" and allowed the purchaser to expend his money in building until the edifice was nearly completed.

The Court intimated that they should infer, in the absence of any statement to the contrary, that the company had not interposed simply because they had not known of the new building—that is, that they did nothing earlier because they knew nothing about it. On the other hand, they thought that Hobday—the purchaser from the company's vendee—had notice of the restrictive covenant, as it was in a deed which was one of his own title-deeds, and at which, therefore, he or his solicitor must be taken to have looked; and as Hobday had notice so had his executor, the defendant Bull, who had taken upon himself to authorise the new building and had taken money for it. The rule of law laid down many years ago in the Leicester Square case, as to restrictive conditions imposed on purchasers by notice, applied in this case. Francis, the co-defendant, had purchased the premises subject to the restrictive covenant imposed by the company and with notice of it. On the whole, therefore, as the building was clearly a breach of the covenant, the railway company were entitled to judgment.

## CHURCH BUILDING AND RESTORATION.

**Machynlleth.**—A new church, designed in Early English style, has been opened on the Maengwyn Road. The work has been carried out under the direction of the architect, Mr. H. Kennedy, of Bangor and London, by Mr. Richard Meredith, of Llanidloes. Messrs. Macfarlane supplied the gates and railings for boundary walls. Messrs. Burnett Bros., of Liverpool, furnished the warming apparatus.

**Gloucester.**—The church of St. John the Baptist has been reopened, after works of reparation and alteration carried out by Mr. Fream, jun., of Gloucester, under the superintendence of Messrs. Waller & Son.

**Hereford.**—The church of St. Devereux, near Hereford, has lately been restored from the plans of Mr. Cheiake, County Surveyor. The dangerous state of the building necessitated the rebuilding of the south wall and re-roofing nave and chancel.

**Derby.**—A Wesleyan chapel has been opened at Rosehill. It is built of red brick with Derbyshire stone dressings. Mr. J. Wills, of Derby, is the architect, and Mr. T. Bakewell the builder. Accommodation has been provided for 734 at a cost of about 3,400*l.*

**Glasgow.**—The foundation-stone of the new Free Church at Whifflet was laid by Sir William Collins on Saturday. The building occupies an excellent site in the centre of the village, and is designed in thirteenth-century Gothic. The end elevation, in which is the entrance, fronts the street, the main gable being flanked by massive buttresses, between which on the ground-floor is a row of narrow cusped-headed windows, lighting the area under the gallery. Above this the gable is filled with a

large four-light window, with a cusped wheel window over, the gable terminating with a carved stone cross, and immediately behind is the flèche or belfry, rising to a height of 60 feet from the street. The main entrance and staircase is in a semi-octagonal transept, giving access through a tiled vestibule to the interior of the church. The internal dimensions are 70 feet long, by 34 feet wide, with a ceiling height of 32 feet, and accommodation is provided for 460 sitters, each having the full allowance of 20 inches per sitting. There is also in connection a small hall or classroom for fifty persons, vestry, lavatories, heating-chamber, &c. The church will be heated throughout with hot water, the windows glazed with tinted cathedral glass, and the fittings and finishings generally of an excellent description, and it is anticipated that, inclusive of heating, painting, gasfittings, &c., the church will be completed for the comparatively low cost of 1,300*l.* The building is being erected from the designs and under the direction of Mr. John B. Wilson, A.R.I.B.A., 112 Bath Street, Glasgow. Mr. J. Thomson is clerk of works, and the work is being executed by the following contractors:—Mason—Mr. Robert Paterson, Airdrie; wright—Mr. Robert Paul, Whifflet; slater and plasterer—Mr. William M'Ouat, Coatbridge; plumbers—Messrs. Phillips & Bruce, Glasgow; painters—Messrs. A. & J. Scott, Glasgow; gasfitters—Messrs. Spence & Sons, Airdrie.

## NEW BUILDINGS.

**New Town-hall for Battersea.**—The foundation-stone of a new town-hall for Battersea has been laid. The site is at the corner of Lavender Hill and St. John's Road. The building is being erected by the Battersea and New Wandsworth Public Halls Company; the ground floor on the two frontages is laid out for shops, while there is a suite of rooms behind, on the same floor, for the accommodation of a club, including, reading, coffee, smoking, and billiard rooms; winter garden, club-hall, and kitchens and servants' offices in the basement. The public hall is on the first floor; 106 feet in length, 40 feet in width, and in height 32 feet. It is entirely fireproof, as are also the staircases and approaches. Adjoining the hall are several apartments, intended for retiring, cloak, and supper rooms; and there are offices for the secretary, and caretaker's apartments. The building will be Queen Anne in style, with facings of steel-coloured bricks, the dressings being of red brick, as are also the moulded cornices, &c. The ornamentation will be carved in rubbing bricks. The design has been prepared by Messrs. Morris & Stallwood, architects, of Reading, and was selected from six submitted in limited competition.

**Asylum for the Blind, Glasgow.**—The new building in Castle Street, which was designed by Mr. William Landless, has been opened by the Earl of Rosebery. An illustration of the buildings lately appeared in *The Architect*. The new building consists of front and back sections, the former containing shops and warehouse accommodation, and the latter the dormitories and school-rooms. To the south of the back-section a rope-walk has been built. The whole buildings are heated by the mild hot-water system, and the arrangements for washing, laundry, and kitchen are very complete. Externally the chief feature is the tower at the south-west angle, semi-detached and hexagonal in form, with balconies and tablets of armorial bearings. There has been introduced a statue of Christ represented in the act of restoring sight to the blind, being the gift of Mr. Charles Tennent, of the Glen, M.P. The north division, yet to be built, is intended to be used for the manufacturing department. A new building is very much required, as the existing workshops are much dilapidated; but want of sufficient funds alone prevents the managers from undertaking its erection. The cost of the division which is so soon to be opened has more than exhausted the funds at the command of the managers, and as they have no borrowing powers under their charter of incorporation, they have no recourse but to appeal to the liberality of their wealthy fellow-citizens to furnish funds not only to pay for that portion already finished, but to complete the northern division, and to equip both the educational and industrial departments in a manner suitable to the wants of a sorely-afflicted section of the community.

## ARCHÆOLOGY.

**Scottish Text Society.**—The following report has been issued by the proprietors of this Society:—Before bringing the proposal under the notice of the public, means were taken to ascertain the opinions of a number of scholars and leading men, both in Scotland and in England, as to the probability of the success of such a society. Answers highly favourable were received from many, and promises of co-operation were given by several. Inquiries were made as to the number of members which would be necessary to maintain in efficient working order a society like the Early English Text Society; and it was found that with 300 members subscribing a guinea each the society would be able to publish annually from 300 to 400 pages of carefully-edited and handsomely-printed



matter. Prospectuses were drawn up and issued, and advertisements inserted in the literary papers and the leading Scottish journals; and by means of these, and by personal exertions and the help of others interested in the success of the society, about 200 subscribers have been secured. A hundred subscribers at least are thus still wanting, but it is believed that these will readily come forward as soon as the success of the society is assured. It is now proposed to issue another prospectus containing two specimen pages, the one of prose and the other of verse; and this it is hoped will be the means of securing the adherence of many subscribers who have hitherto held back. The society is being established purely in the interest of the Scottish literature and language, and it is not too much to hope that Scotsmen, both at home and abroad, will give their hearty support to an undertaking that at once appeals to their patriotism, and would tend in no small degree to foster the national life. The value of such undertakings has already been recognised in foreign countries, where similar societies are working with marked success. Mr. Furnivall, Professor Skeate, Dr. Murray, editor of the Philological Society's new dictionary, and other prominent members of the Early English Text Society, have expressed their wishes to assist; and from both America and the Continent letters have been received indicating the interest which is felt in the objects of the society.

### ART SCHOOLS.

**Godalming.**—At the distribution of the prizes in this school an address on art was delivered by Mr. C. F. Hayward, F.S.A. He said it was not necessary for every one to be both a teacher and a practical worker in art, nor, on the other hand, to be an artist to have some knowledge of art itself; and however desirable it might be for those who attended art schools to know something of art as well as to practise it, it was not easy to carry out, unless with much more elaborate means and assistance than we had at command. Such a development of their own school was hardly to be expected yet, though indeed it was an end to be desired, "a consummation devoutly to be wished." The lecturer alluded to Giotto and the Renaissance period of art, and observing that years ago men did better work than we could do, and had left such footprints on the sands of time that we could not if we would efface, and certainly should if we could retrace, instanced the wall decorations discovered at Pompeii, illustrations of which were displayed on the walls; but this art of Pompeii was, after all, only a Renaissance, a revival of ancient Greek art. Speaking of the wall paintings at the east end of St. Mary's, Guildford, he said the hard and crude and ineffective style of these works could not be at all admired as paintings, but only valued as historical curiosities. He remarked that science was having her day, and they would do all to encourage her, and art also was doing things it never did before; but still when we looked back we saw triumphs which we could not look for, and glories which we could not attain unto. In that public hall they were content to have around them, when they came together in groups for art purposes, meaningless forms and patches of colour mixed in mud and water, inartistic benches, tables, chairs, and everything out of harmony with a proper state of public feeling for art and artistic surroundings. The one redeeming feature was their art schools, their aspirations for something better, their desire to develop such talent as they found they possessed, their hope for better things, and their appreciation of what was good and artistic around them, with, he wished he could add, their abhorrence of what was mean, shabby, and inartistic. The very fact of the false and absurd æstheticism of the day was a hopeful one, as it was a protest against much that was bad, though itself leading to much the same thing in another direction; but the bend must be the other way to get the thing straight, and, Mr. Hayward continued, this false and spurious art, this show of taste in the dress and furniture of the period, however bad, was but the homage paid by bad to the good, a compliment to the value of something which was not otherwise appreciated. The lecturer drew a favourable comparison between the development of real art in the present day with that existing years ago, and pointed out the facilities, inducements, and encouragements to the cultivation of science and art. In conclusion, he asked if it was absurd to hope that they might have in that locality something more to help on the cause of art and good taste, science and true progress, such as a public library, a museum, a hall for lectures, and lectures or readings themselves, a small laboratory, and at least classrooms, where the science and art of Godalming might have local habitation, if it did not eventually gain a name as well?

**Mr. J. A. Gotch**, architect, of Kettering, at the last meeting of the Kettering Literary and Philosophical Society, gave a lecture on "Our Countryside and its Ancient Worthies," which referred to various places of interest in the neighbourhood, including Rockingham Castle and the picturesque residences at Drayton, Kirby, Rushton, and Boughton, including interesting particulars regarding the early possession of those places.

### GENERAL.

**Mr. Gibbins**, of Easington, and Miss Gibbins, are the donors of a sum of 6,000*l.* for the new infirmary at Stratford-on-Avon. The building will be commenced forthwith.

**Messrs. Eastwood & Co., Limited**, ask us to say that the Shoebury paviors used for facing the large building, St. Mary Overy's Wharf, illustrated in *The Architect* of November 18, were supplied through them from the fields of the late Mr. Dale Knapping, of Shoeburyness.

**Mr. Burnard**, the ex-Mayor of Plymouth, has offered the painting of the opening of the new Eddystone Lighthouse, by Mr. H. Luscombe, to the late Banquet Committee.

**Mr. Ruskin** will lecture at the London Institution upon "Cistercian Architecture," instead of on "Crystallography," as announced.

**Dr. Schliemann** has completed the erection of his residence in Athens, which has cost more than 20,000*l.*

**Mr. T. Arnold** has been appointed architect for the new Congregational Church in George Lane, Woodford.

**Mr. Ewing**, who was professor in the University of Tokio, has been appointed Professor of Engineering in University College, Dundee.

**The Memorial** to the late Sir Wyville Thomson, who was Professor of Natural History in the University of Edinburgh, is to take the form of a bust for the University, and a stained-glass window in the church of St. Michael, Linlithgow.

**The Education Department** have after much correspondence recognised a new school erected by the Kingston School Board, although the accommodation is only 80 cubic feet and 8 square feet of area for each child.

**The Plans** of Mr. E. Pincher, of West Bromwich, have been selected in competition for proposed Board schools at Black Lake, West Bromwich.

**The Prefect of the Seine** has advertised that the materials of the Tuileries will be sold by public auction on December 4. The upset price will be 10,000 fr., and the biddings are not to be less than 25 fr. The ground is to be cleared within six months.

**The Electric Tramway** from Portrush to Giant's Causeway has been completed, and at the private trial on Tuesday a speed of ten miles an hour was obtained.

**Paintings**, supposed to be of considerable antiquity, have been discovered, hidden by plaster, on the south transept wall of Northallerton Church.

**A Classic Case** has been designed by Mr. W. H. Dunn, architect, of Newcastle-on-Tyne, for the organ of the Durham Road Baptist Chapel, Gateshead.

**The College of Physicians, Dublin**, will on December 1 hold an election for an examiner of candidates for certificates in sanitary law and sanitary engineering.

**The Ancient Perpendicular Tower** of Stoke River Church, North Devon, is being restored under the direction of Mr. Edwin Dolby, architect, of Abingdon.

**A Polytechnic Exhibition** was opened in the Corn Exchange, Alnwick, by Earl Percy, on Tuesday.

**The Sandbach Local Board** have been threatened with dissolution for neglecting to take action towards supplying the town with pure water, as suggested by the Local Government Board.

**Plans** by Mr. W. Owen have been adopted for a proposed school of art at Warrington.

**An Exhibition**, illustrative of art and industry on an extensive scale, was opened last week in Liverpool.

**The Madras Pagodas** have now been put in a state of security. The work undertaken consists chiefly in the removal of drift sand from the immediate neighbourhood of the monolithic *raths*; in cutting off the drainage, which was seriously affecting the sculptures at the Krishna Mundapam, and the great rock carving known as the Arjuna's penance, considered to be probably the largest and most important single work of ancient art in India; the restoration of the Naga Rajah's head and of the elephant's tusk to their proper places in the latter tableau; the securing as far as possible of the insecure stones of the Stone Temple; and a few minor works.

**Manchester Cathedral.**—In order that the work of restoration at the Cathedral may proceed as rapidly as possible, it has been decided to effect a separation between the nave, or body of the cathedral, and the chancel, with its adjoining chapels. This will be done by means of a temporary partition of wood, which will prevent the sound from passing, and enable the daily and occasional services to be carried on in the chancel without interrupting the work in the nave. It is not intended to interfere with the Sunday services in the nave. Mr. James Chadwick, of High Bank, Prestwich, has undertaken the restoration of the most westerly bay in the south arcade, and his gift will include a stained window in the clerestory. It is expected that the north arcade will be completed about Christmas, and preparations will at once be made for beginning the work in the south arcade.



# The Architect.

## THE RENEWED STUDY OF GREEK ARCHITECTURE.



HERE seems to be a considerable probability that before long the higher order of architectural investigation may turn again in the direction of the ancient Greek remains. It is not only in the excavations of Dr. SCHLIEMANN and General DI CESNOLA that we perceive the continuance of the old antiquarian spirit, but when we are reminded that the Trustees of the British Museum sent Mr. WOOD to Cyprus so promptly in 1878 to report to them upon the prospects of an exploration of the suggestive masses of ruin which are found on that island, and still more when we have unpretentious vacation tourists like Mr. L'ANSON wending their way to the same spot to see for themselves whether anything can be seen, the question will naturally arise in the minds of many whose leanings of taste are towards the classic modes of antiquity, whether there is not beginning to appear, as a reaction from the romantic movement which has so long, and no doubt in so interesting a manner, possessed England, a disposition, even if unconsciously manifested, to return to the grand field of classical study which once so well repaid the exertions of refined and generous intellects.

It may be said that we already have in our libraries all that can be desired of the most minute information respecting Hellenic architecture; and certainly this need not be disputed. There are men still living whose names are historical as Greek antiquaries; and indeed the work of one of the greatest of them, Mr. PENROSE, is that of a man still, happily, in middle life. But, as it seems to us, the mine of ancient design which is constituted by the books is scarcely sufficient now. In other words, there is in our day so decided a demand for something quite new in all matters of learning, that such a thing as a new Greek movement is probably not to be looked for at all on the old lines, or at any rate not to be expected to assume any special character of public interest unless upon the basis of some novelty of discovery. Therefore, so soon as the change of taste is ripe for the resumption of the antique, no matter how sincere may be the groundwork of admiration, there must be provided something more than the folios of the Society of Dilettanti for an English public to admire.

An illustration of this—no matter if it may perhaps be thought a little far-fetched—is to be observed in the way in which the authorities of the military world have recently been glorifying the successful little army which has returned from Egypt. Not for a moment would we disparage the merit of the achievement in question, but what we take leave to make use of in our present argument is the necessity which evidently lies upon those in whose good hands such matters rest to awake a special impression upon the public mind. The reader may have noticed also, amongst other things, how the hawkers are selling reprints of old newspapers reporting such incidents as the victory of Waterloo and the death of NELSON. This particular stimulant to patriotism emanates of course from the Seven Dials or Whitechapel; but suppose it, for the sake of argument, to have come from higher quarters. The flatness with which such an appeal would fall if not supported, and indeed led, by something belonging to the passing moment, may be taken as a pretty good indication of what would happen in our own artistic case if the Dilettanti were to attempt to stir up enthusiasm for the antique by merely republishing, for instance, their excellent books. The mind of the day is perhaps a little less solid than it ought to be, or a little more anxious to be amused; or it may be only that we are a good deal more in a hurry than we were a short half century ago; but as we happen to be, so must we consent to accept ourselves.

It is in pursuance of this train of thought that we very much wish something could be brought about to procure for Mr. WOOD the means of resuming his excavations at Ephesus in a manner worthy of the occasion. It cannot, we apprehend,

be regarded as otherwise than, so to speak, mathematically certain that the remains of the entablature of the great temple of DIANA are to be had for the digging in the immediate site of Mr. WOOD's successful discovery of the remains of the columns. Not only so, but the remarkable skill which the discoverer brought to bear upon the calculation of chances in his former search ought to justify the hope that the same ingenuity would in his further operations effect similar results with the same scientific economy of effort. The enthusiasm also with which he has devoted his life to the cause is all that could be desired in an explorer. The only remaining consideration is the money requisite for his further work; and this would be such a bagatelle, we do not say to our Government authorities, but even to any one of a good many of our wealthy connoisseurs, that the difficulty experienced in obtaining it seems almost a jest. A builder, for instance, or a brewer, to say nothing of a stockbroker or a banker, might write a cheque at any moment for the five thousand pounds required, and never know, except by a line in his pass-book, that virtue had gone out of him. And yet, if this reminder could be made to take practical effect upon any one of a hundred gentlemen who could readily be named, the consequences to the world of art at this moment might be beneficial to a degree which no one can venture to predict.

At any rate, it is, as we think, some act of this kind that must be done, and some kind of corresponding results that must be accomplished, before any revival of the finer Greek taste can be expected to be brought about in England. The process of revival in such a case is something like this. The hitherto prevalent taste having in time run its course, the insatiable appetite for novelty, which increases in intensity as one generation succeeds another, does not so much seek out another model as unconsciously demand its discovery and introduction. It is then supplied by two agencies. One is reaction from the former taste, now the subject of satiety. The other is generally some fortunate accident. According to the degree of reactive force—which depends largely upon the former vigour of that which causes the reaction, namely, the declining mode—so will be the strength with which the rising mode takes possession of the public mind; and according to the importance of the requisite accident, when at last it comes to pass as an influence in the right direction, so will be the additional interest thus conferred upon the novelty which the public mind is waiting for. Our present position, therefore, being one of inevitable reaction from the revived Gothic school, it seems very certain that the reactive force cannot expend itself upon anything short of an almost equally powerful impulse; so that the probability that such an impulse must speedily find its way to the Greek seems to be matter of course. It is not merely in the art of Italy, that is to say, whether modern or antique, that reactive artistic taste in such circumstances as ours will seek satisfaction, but in that fundamental Hellenic spirit in which the Roman had its wonderful origin.

One circumstance in particular which points to this result is the adherence of the French to the Greek spirit throughout the whole of that later period of modern Classicism which commenced with the great Revolution, and still continues. In all that concerns Mediævalism England has been, and is, wholly independent of all other countries, having its own Romance in complete form and in full force; but as soon as England ceases to be Romantic, and begins to be truly Classic, it must turn, we think, in the same direction as French taste, as it is in fact already doing. No doubt the general style of practical everyday work will embrace more than one form of the Renaissance; but when we remember how much the refinement of this style depends upon detail, it seems to be clear that as the coarse mouldings and slipshod proportions which so often characterise Italian work come to be superseded by more refined detail, it is the Greek spirit that must be introduced. Recent designs of an ambitious or prominent order have indeed shown this tendency very distinctly; and we may certainly say that classic criticism, so soon as it makes its appearance—which it has not yet done—will necessarily accept the Greek type of features as its ideal and model. Even in the common Queen Anne work it will be seen on close inspection that this promise is being fulfilled. Some of its true Dutch features are clownish to the last degree, but wherever the *finesse* of a thoughtful pencil has come to be communicated to the proportions and details, it cannot but be seen that the Greek motive is exercising its influence already,



and that the more definite the attempt at refinement the nearer is the approximation to Greek motive.

We need not scruple to say, therefore, that the resuscitation of criticism upon quasi-Greek principles may be expected in England as soon as some sufficient force is by accident communicated to architectural taste; and although it is useless to say that endeavour can promote the advent of accident, we may at any rate express the opinion that the encouragement of enterprise in a classical direction is what may be strongly recommended to those in whose hands the power to help the progress of art happens to lie.

## IN THE SOUTH OF HUNGARY.

BY A CORRESPONDENT.

THE ramifications of the Iron and Steel Institute's excursion this year were so numerous, and the distances so great, that those who carried out the complete programme soon found that a month was quite insufficient for the purpose. We propose in the present article to follow those few members who penetrated to the old province of Banat, in the extreme south of Hungary, almost bordering upon Serbia, where an influential company in connection with the French *Crédit Lyonnais* owns a domain of more than 300,000 acres of land rich in minerals. The company is styled—to give its full title—the “Kaiserliche Königliche Privilegirte Oesterreichische Staats-Eisenbahn Gesellschaft,” because in 1855 the directors bought a portion of the Austrian State Railway connecting their domain with Vienna and elsewhere. A notion may be formed of the magnitude of the concern when it is stated that the capital of the company is 16,000,000*l.*, the value of the property 3,200,000*l.*, and the number of persons employed about 40,000. The company possesses seigneurial rights over its domain, and even nominates the Greek and Roman clergy. The nearest approach in the United Kingdom to such an organisation was the former “Governor and Company of Copper Miners in England,” who were all-powerful in their valley near Swansea. The population of Banat consists of several nationalities, Roumanians being the most numerous. They are descended from the old Romans who came with the Emperor TRAJAN in the year 105 A.D., conquered the Dacians, and remained in possession of the soil. The Bulgarians, who are next in importance, were colonised under MARIA THERESA. Then come the Servians, Slavonians, Hungarians, Germans, Bohemians, and a few gypsies. The president of the company is Baron MAURICE DE WODIANER, and the Director-General M. LÉOPOLD BRESSON.

Leaving the handsome new terminus at Buda-Pesth, which, with its shrubs and parterres inside, looks as much unlike the English railway station as possible, we proceed by the *courier-zug* to Bogsan, where there is a gigantic poplar tree, 20 feet in circumference. Here is also the junction with the railway, of small gauge on account of the sharp curves, that leads up a beautiful valley, with hanging woods clothing the slopes, to the town of Reschicza, which may be regarded as the capital of the district. It is divided into Deutsch and Roman Reschicza, as the German and Roumanian populations, numbering together about 10,000, remain each in its own district. The streets are long and straggling, with such painful uniformity that it is difficult to distinguish one from another. A portion of the water from the little river Bersava is diverted through the streets to carry off the refuse in an open channel; and it is almost superfluous to add that diphtheria is rife. With few exceptions the houses are on the same plan, having no upper storey and with the entrance invariably at the side. As is generally the case in Hungary, the brickwork is pointed so that the mortar joint is recessed, which produces a good effect; and the guttering is placed over instead of under the shingles which form the general covering to the roof. The windows are of the casement type, with *persiennes* outside; and in winter these latter give place to additional window sashes. No wall-paper is used, on account of the harbour it affords to insects; but the walls are lime-washed with a ground tint, over which various designs are stencilled in one, two, or more colours.

One of the two doctors engaged by the Company to attend their men in Reschicza kindly conducted us through the town, in order that we might observe the Roumanian house industries. All the houses were open to the doctor; and the women brought out their festival costumes which are made entirely by them-

selves. They spin with distaff and spindle as they walk along, often carrying baskets of fruit or vegetables on the head; and this gives them a remarkably good carriage. The thread is woven in a rude loom, gold and silver threads being often incorporated in the stuff.

The costume is most picturesque, the colours being, as a rule, gorgeous. The Roumanian wife wears a large white under-garment of a form which resembles the alb of the Roman Catholic clergy. This garment reaches to the sole of the feet, but is looped up by means of a girdle, so as to fall slightly below the knee. The sleeves are very full, and are ornamented with embroidery at the wrists. A square apron is worn tight in front, the pattern varying with each village; but the prevailing colour is red. A similar garment, decorated with fringe, is worn behind; and in some localities a long wool fringe of various colours completely surrounds the figure to the exclusion of the apron. A tightly-fitting jacket—of silk in summer, and sheepskin variously ornamented in winter—with a handkerchief of some bright colour for the head, completes the costume. Bare feet are the rule in summer, but leggings and sandals protect the feet and ankles in winter. On holidays the newest and richest dresses are worn, and are often supplemented by a necklace of large silver coins, generally ducats. The carpets and blankets, red, with an Oriental striped pattern, are also woven at home, and handed down from mother to daughter. The bedstead is of wood; and a kind of settle with railed back is placed against the side that is away from the wall, serving admirably for keeping children from falling out.

We enter the Greek Church, the turret of which, like many others, is resplendent with tin-plate, and notice the names of the occupants of the stalls for men. They include that of FORTUN, which is quite old Roman. A copper collecting-bowl, almost worn through, has probably been in use for the last 800 years. An old book of Psalms, printed in ancient Slavonic characters, contains an entry in the fly-leaf, dated 1789, that the Emperor JOSEF II. is dead; while the office-book bears the date of 1758.

The principal streets of Reschicza on a market-day present a very animated appearance, while the great variety of nationalities, and therefore of costumes, affords a rare opportunity for the artist. While the Roumanian women affect the more showy colours of red and yellow, the Bulgarians adopt the quieter tints of blue and white. The handkerchief of these colours, worn on the head, is distended in a singular manner on either side. Rude waggons, lazily drawn by mouse-coloured oxen, bring in fruit, vegetables, and Indian corn; and the drivers, with their tanned Oriental faces and conical fur caps, form splendid studies.

The ironworks were founded in 1771 by MARIA THERESA, and have continued in the possession of the Imperial House of Austria until they came into the possession of the Company. At the present time there are four blast furnaces, one fired with coke in the usual way, and the rest with charcoal. There are four BESSEMER converters, which produce steel of almost as uniform quality as the SIEMENS-MARTIN furnace. A capital view of the works is gained from the Kreis-berg, whence also may be seen in the distance the Transylvanian Alps, the highest peak of which is Mundja. A place of public enjoyment, called the Josephinen-Park, has been set aside for the people; and a portion of the beech-clothed slopes of the hills has been enclosed, and a pretty villa built in the French style for the directors when they visit the works. It is here that the members of the Iron and Steel Institute were lodged; while the hall of the Norvotny Hotel was specially decorated for the banquet, bearing the inscription “Hoch die Eisen-Industrie!” The architect of the Company, Herr CSERVENTRA, had also designed a triumphal arch for the station, bearing the following inscriptions in Hungarian, “ISTEN hozott” (God hath sent you), and “Aldás utatokra” (a prosperous journey).

Leaving Reschicza, not without regret, we return to Bogsan by the small-gauge railway, and thence walk, over the hills and through a pine forest gay with colchicums, to Moravicza. This is the centre of rich and extensive mines which produce brown hæmatite and magnetic iron ore, the former containing 38 per cent. and the latter 65 per cent. of metallic iron. The production is at present from eighty-five to ninety thousand tons yearly; but it can be increased by one-half if required. We also came upon a hill consisting entirely of limestone spar in remarkably regular rhomboid crystals. At one of the



colliery villages, we had met with the salutation of the Early Christians "Gelobt sei JESUS CHRISTUS!" to which the orthodox reply is "In Ewigkeit"; but here, and still further south, children, and even grown women, say in passing "Ich küsse die Hand," while the invariable salutation of the miners is "Glück auf" (good luck). From the highest point of the range of syenite hills enclosing the iron and limestone we have a fine view of the Siebenbürger Carpathians, a prominent point of which, the Daniele Kuppe, is 607 meters above the level of the Adriatic Sea.

From Moravicza we drive through a beautifully-wooded country to Dognacska, where there are two charcoal-fired blast-furnaces, and also smelting-works, for reducing the silver, copper, zinc, and lead ores by a long and tedious process. Here we pass the night at a combined inn and farm; and in the morning we start for Krassova, the nearest station, in a "wagen." This "wagen" is the only possible vehicle in such a mountainous country. The sides are open, and there are no springs; but, fortunately, the leather seat is well stuffed, and there is plenty of hay in the bottom. The owner and driver, with a sprig of rosemary in his hat, is of German extraction, but speaks more or less of four or five languages. We pass through mountain gorges, with the hills towering high up on either side, generally clothed with oak and beech, the rich autumnal tints of which throw into strong relief the few firs and spruces that are dotted about here and there. The distance is only eleven miles as the crow flies; but the necessary windings make it at least three times as long. As the time approaches at which the only train in the day may be expected, and there is still a considerable distance to traverse, the driver forsakes the road, or rather track, and boldly makes a short cut across the mountain. The pair of small but splendid horses do their work admirably; they climb any obstacle, even rocks, and the "wagen" must follow. The honest fellow well earns the stipulated three gulden, and on receiving a trinkgeld to boot, he actually wants to kiss the hand that gave it. This, of course, is not permitted; but a hearty shake of the hand is given instead.

The "bummel" train—one composed of both goods and passenger carriages—is not very regular as to hour, so there is ample time to watch the quarrying of the limestone and cement rock, which are burnt on the spot in a Hoffmann continuous kiln with fourteen compartments, capable of burning twenty tons a day. Between Krassova and Anina stations is the junction, with a tramway leading to the Predett Steinbruck, whence is obtained a remarkably fine-grained limestone, nearly marble, of which large blocks are obtained without a flaw. Its colour is almost white when rough hewn, but light brown when polished. This valuable quarry belongs to Herr JOHAN VON BIBEL, of Oravicza. The men are paid from 90 kreutzers (1s. 6d.) to 2½ gulden (4s.) a day.

Krassova station is the highest point of the *Montan-Bahn* of the K. K. Priv. Oester. St.-E. Gesellschaft, being 548½ meters above the sea-level. The necessarily slow speed in ascending the gradient of one in fifty, with sharp curves at the same time, affords time to enjoy the grand scenery; and, in descending, the brakes are screwed hard down on every sixth or seventh waggon. It is necessary to stop occasionally and throw water over them to prevent the blocks from firing. In one instance the line passes along both sides of a beautiful valley, crossing the stream by a bridge, and entering the hills by tunnels on either side of it, in order to obtain a curve of sufficiently large radius.

At Oravicza the cement burnt at Krassova is ground and prepared for the market, when it resembles Roman cement. Here also is the mineral oil factory, where, until lately, the raw oil distilled from the bituminous shales of the coal measures were subjected to a further process of distillation and refining, being then sent off in American oil barrels for illuminating purposes. At the present time, however, the works are kept going with raw oil from the wells in Roumania, which can be bought more cheaply. As an illustration of the remarkable extent to which the English language is cultivated in Hungary it may be mentioned that the wife of the director has learnt English, and amuses herself with DICKENS' works. She spoke English fluently and with surprising correctness, although for the first time conversing with Englishmen. Oravicza, however, is a little centre of civilisation in the midst of a wild, mountainous, and thinly-populated district. It possesses an elegant little theatre, where performances are given in German, combined with the casino or club. The "Kaiser

von Oestereich" is a remarkably comfortable and well-managed hotel, though possessing the strongly-marked individuality of the country.

Here, too, is the corn-mill, an imposing brick building of six or seven storeys, erected by the Company in the interest of their employés at a cost of 175,000 fl. (14,000*l.*). The six pairs of stones, and seven roller mills by GANZ & Co., of Buda-Pesth, are driven by a 75 horse-power horizontal engine, and are capable of producing 5,000 tons of flour yearly. This large mill, with its elaborate appliances—separators, lifts, "creepers," &c.—affords a strong contrast to another primitive mill near Reschicza, in which the upper stone is driven direct by a turbine keyed on to the same spindle, the speed being regulated by admitting more or less water into the race.

About five pounds weight of gold is obtained yearly from the ore found in the neighbourhood of Oravicza, and is reduced by a primitive process. Formerly 50 lbs. were obtained yearly, and during the last twenty years 1,250 lbs. have been extracted; so that the present poor result is only due to inactive working. Malachites, copper pyrites, and ochre earth are also met with. Here, too, is the mineralogical museum, rich in good specimens, and also the central laboratory of the Company for the whole of their domain.

At Anina, the terminus of the Mountain Railway, is an extensive coal deposit in the lias formation, the most valuable in Hungary. This led to the erection of two blast-furnaces for smelting the blackband of the coal measures, mixed with the magnetic ore brought from the nearest mines. One of these furnaces is fired with part charcoal and part raw coal, giving a very good result. The finished iron turned out is of remarkably good quality, as manifested by the collection of "fractures" and "cold tests," and is rather too valuable a product to be used for making rolled joists like that of Belgium. There is also an extensive foundry for making stoves and ornamental castings for building purposes, of which these works have a specialty. The blast-furnace manager and the head of the rolling-mills are both most appropriately named, the former being Herr RINKEISEN and the latter Herr SCHMIDT.

Those who joined this extensive excursion to the south of Hungary had abundant reason for congratulating themselves, as there were so many and varied points of both general and professional interest. The extreme beauty of this part of the country warrants the quaint sentiment of PETÖFI SANDOR, the most noted Hungarian poet:—

Hu a föld ISTEN Kalapja  
Akkor a mi hazánk a bokréta rajta.

(If the world is the hat of God, then is Hungary the posy thereon; or, to render the phrase more reverently, if less literally—If the world is God's crown, Hungary is its richest jewel.)

## HISTORIC WINCHESTER.\*

IF an inquiry could be instituted among English towns to ascertain which is the most memorable, Winchester need have little fear of the result. In its poetry and prose, fact and romance intermingle so closely that the historian runs the risk, when narrating annals of the Hampshire city, of allowing his imagination to supplant research. Winchester crops up in the very earliest English records. It may have been a Celtic settlement, and it was a Roman station of some importance. Did not King Lucius, the last King of the Britons, found a church there, as well as in Cornhill in London?—that martyr Lucius, whose effigy, according to Mr. Thackeray, is to be seen at Coire, with tight red breeches, a Roman habit, a curly brown beard, and a neat little gilt crown and sceptre. Where but at Winchester are we to seek for Camelot? and does not the mystic Round Table still exist to confute all sceptics who may doubt of Arthur's residence in the palace? The axe which belonged to Colbrand, the Danish giant, is unhappily no longer among the treasures of the city (it was abstracted a couple of centuries ago); but as there is no doubt that it existed, there need be no hesitation in believing in the combat at Winchester between the renowned Guy of Warwick and the giant, in which the great nursery hero was victorious. The wooden chests in the cathedral have for generations been supposed to be the caskets wherein the bones of the West Saxon kings have reposed, and who can testify to the contrary? It was to Winchester

\* "Historic Winchester, England's First Capital." By A. R. Bramston and A. C. Leroy. Longmans, Green & Co.



Cathedral that Canute turned when he rebuked his courtiers and there deposited his crown. But if we were to refer to the legendary history of Winchester our article would be interminable. It is the history of Winchester, for which evidence of another kind is forthcoming, that is related by the Misses Bramston and Leroy in the book which we have now to notice.

At the time of the Norman Conquest, Winchester was a place of great importance, but as it was held by the widow of Edward it was not seized by the politic William. After a time he erected a palace which was his resort in spring. It was in Winchester that he was crowned for the second time; there the last of his Saxon opponents, Waltheof, the son of Sigurd, was executed; and it was there the great Domesday roll (from which Winchester was exempted) was approved by the king, and the curfew was first heard. One of William's chaplains, Walkelyn, was consecrated Bishop of Winchester, and he lost no time in undertaking the erection of a cathedral:—

Bishop Walkelyn must have looked with some contempt on the Saxon cathedral, grand and massive though it was for the times in which it had been built, notwithstanding its being considered small in Norman estimation, and doubtless disfigured by the rough usage of the Danes. He therefore determined to build a new cathedral worthy of the capital of the great conqueror, and accordingly set about doing so at his own cost, using stone from a quarry in the Isle of Wight, whence, years after, William of Wykeham also brought his material. As time went on, however, finding that he required a great quantity of wood, he begged the king to give him as much as he could take from the forest of Hanepinges (now Hemptage Wood) in four days and nights. To this William consented, and the Bishop having collected all the men he could, the whole wood was cut down in the prescribed time. When the king found that his wood had disappeared, he was at first very angry, but eventually forgave the—we may almost call it—practical joke which had been played him.

The first services were held in the cathedral on April 8, 1093, six years after the death of William. His successor was not zealous in church building, and on the death of Walkelyn he appropriated the revenues of the see. When the corpse of the Red King was carried to Winchester from the New Forest, it was received in silence, for prayers were supposed to be unavailing after so much sacrilege. The tower of the cathedral fell in 1107, and it was interpreted by some as a judgment for the permission given by the clergy for the burial of Rufus before the lectern in the choir. During the reign of Henry I. the city prospered, and we may judge of the value of the see in those days from the fact that the king's nephew and namesake, Henry of Blois, was consecrated bishop in 1029. This prelate at one time aided his brother Stephen and at other times opposed him, but amidst his treasons he was not neglectful of building. He founded the hospital of St. Cross in 1136, from which bread and beer continues to be dispensed to wayfarers. The late Mr. Carlyle once accepted the dole, and in return we are told he pronounced a malediction on the priest, who received 2,000*l.* a year that was meant for the poor, and spent a pittance on small beer and crumbs. Bishop Henry appears to have been something of a collector, for Thomas A'Becket, as archbishop, on one occasion remonstrated with him for having alienated a certain silver cross from Hyde Abbey, which he was ordered to restore within forty days. The relic is supposed to have been Canute's cross. It was returned, and restitution made for the offence.

The bishop whose name is most associated with Winchester is William Long, commonly known as Wykeham, from his birthplace. Froissart says that the bishop was so much in King Edward's favour that everything was done by him and nothing was done without him. He was as munificent a churchman as Wolsey, and the statutes of the school he established at Winchester are enough to indicate that he was in advance of his age in educational matters. His motto, "Manners makyth Man," would suggest that his success was owing to his agreeableness about the Court; but, however this may be, he had better qualities. As one of his successors, the Roman Catholic Dr. Milner, said of him, "he performed so many great actions that we are at a loss whether to admire him most as a statesman, a bishop, or a Christian." His work at the cathedral is thus summarised in "Historic Winchester":—

Wykeham, on October 3, 1394, set about the definite continuation of that undertaking begun by his predecessor, probably with his assistance, which during the greater part of the last twenty years had been in abeyance. This may briefly be described as the transformation of the whole nave of the cathedral (with the exception of the part altered by Edington) from Norman into that Per-

pendicular which we now see; pillars, arches, windows, and roof being so entirely changed as to bear no trace on the surface of the former style. The cloisters adjoining the south side of the cathedral are thought by Dr. Milner to have then probably been taken down and rebuilt so as to correspond with his other alterations. The work went on without intermission, and it was by no means finished before the bishop's death; yet the design and plan of it was so entirely his, that the whole may with perfect justice be attributed to him. "Master William Winford" was architect or mason, "Dominus Simon Membury," clerk of the works, and "Brother John Wayte," controller on the part of the prior and convent, by whom the scaffolding had to be provided.

Wickliffe suggests that Wykeham was more of a castle builder than a theologian, but in those days it would seem that a bishop of Winchester must be concerned in secular affairs, and they were not often engaged on work that was as harmless as building. Wykeham was a worthy of whom any country might well be proud. Few men were less disposed than Mr. Carlyle to admire a Catholic bishop, but it is recorded how when at Winchester he took hold of the hands of the statue of Wykeham and patted them affectionately. "He rightly values," said his companion on the visit to Winchester, "the brave man who built Windsor, and this cathedral, and the school here, and New College at Oxford." Wykeham was succeeded by Henry Beaufort, the half-brother of King Henry IV., but he was too engrossed with the troubles in England and abroad to give much thought to Winchester until he retired from the Court. Then we are told "he employed some of his riches in continuing Wykeham's work on the cathedral, as we see by his device of the white hart chained, carved in the nave high up below the triforium. And in the choir his motto, "In domino confido," points to additions or restoration in that part as well." Beaufort died at Winchester, although in the play of "Henry VI." his death is represented as occurring in London, and it is needless to say that the circumstances attending his death which have been introduced in the play are without foundation. Soon afterwards Winchester seems to have lost its prosperity. In 1452 the citizens sent a petition to that King for aid towards repairing the houses, and the annual grant of forty marks was restored.

Some of the prelates who ruled at Winchester during the latter part of the fifteenth century expended a part of their revenues in additions to the cathedral. Richard Fox, the founder of Corpus College, heightened and finished the altar screen, replaced the side aisles of the presbytery, added the flying buttresses on the outside of the cathedral, and built the beautiful chantry, which his college still repairs. "One may picture the old man—blind for the last ten years of his life—led daily for prayer and meditation into the little inner vestry of this chantry, which ever since has been known by the name of 'Fox's study.'"

Wolsey was Bishop of Winchester, but to what extent he carried out the duties is not known. He dissolved some monasteries in the diocese in order to endow his colleges at Oxford and Ipswich. It was to Esher, one of the houses belonging to the see, that he was ordered to retire after his fall. In the play of "Henry VIII." it is suggested that he was not the bishop. Norfolk says:—

Hear the King's pleasure, Cardinal: who commands you  
To render up the great seal presently  
Into our hands; and to confine yourself  
To Esher House, my lord of Winchester's,  
Till you hear further from his Highness.

This is incorrect, for Gardiner, who may have been referred to as "my lord of Winchester," did not obtain the bishopric until after Wolsey's death.

Fox may be considered to be the last of the bishops who were gifted with an enthusiasm for building. It is astonishing how little has been done for the cathedral or the other buildings of the city during three hundred years, although for a great part of that time the revenues have been very large. Under Henry VIII. the most valuable of the cathedral treasures were appropriated. The site of the Abbey of Hyde was assigned to Wrothesley, and as he was eager to have it cleared, in the course of a year Leland could record "in this suburbe stode the great abbay of Hyde." One of the Elizabethan bishops, Robert Horne, was so orthodox that he was described as "a man that could never abide any ancient monuments, acts, or deeds that gave any light of or to religion." Accordingly, he "heartily entered into the work of defacing his own cathedral," and supplemented the work of Henry Cromwell's commissioners. In the reign of Charles I. there was a reaction,



and the cathedral was partly repaired; but when the Civil War broke out Winchester was one of the first places on which the visions of Colonel Francis Quarles, poet and parliamentarian, were realised:—

Whate'er the popish hands have built,  
Our hammers shall undoe;  
We'll break their pipes, and burn their copes,  
And pull down churches too.

These words might be said to describe what was done in Winchester in 1642 by Sir William Waller's Puritans. One passage from a contemporary record will suggest the frenzy of the time:—

"And now having Ransacked the Church, the Troopers (because they were most conspicuous) ride through the streets in Surplices, with such Hoods and Tippets as they found, and, thus clad in the Priests Vestments, rode carrying Common Prayer-books in one hand, and some broken Organ Pipes, together with the mangled Pieces of Carved Work but now mentioned, containing some Histories of both Testaments, in the other."

We have no space to follow the history of Winchester in more recent times, but we recommend the excellent volume by the Misses Bramston and Leroy to the attention of our readers. If the publishers could secure a series of local histories corresponding with it, they would deserve the gratitude of Englishmen. Too little attention has been paid to the subject; and there should be a demand for books which, while containing all that was noteworthy in the annals of a town or country, yet dispensed with the twaddle of guides and guide-books.

### SUNDRY WORKING DRAWINGS.\*

By J. P. SEDDON.

WHEN I was asked to read a lecture to this Association I did not like to refuse, and yet I felt that I really had but little to say beyond what I have already said at one time or another in these rooms, either with regard to the general principles or the practice of the art of architecture.

It is true that a very tempting list of subjects suitable for architectural essays was kindly submitted to me by your officers, from which I might have selected a theme whereon to discourse; but I thought that the task of working up the necessary materials for such a lecture might fairly be left to some of the rising younger men in the profession, who have both more time and ambition for such a purpose than I now have.

It struck me, however, that there must be, or at least ought to be, stored in the folios and memory of one who has been so long in architectural practice as I have been, drawings and incidents which, though doomed to ultimate and speedy oblivion, might be temporarily revived for the advantage of his younger brethren upon such an occasion as this.

I chose, therefore, the title of "Sundry Working Drawings" simply as a convenient peg whereon to hang, as it were, some gossip which might suffice to occupy one of the evenings of your session. If this should prove, as I cannot but fear it will, to be of questionable taste, as partaking somewhat too much of an egotistical nature, I still venture to hope that, though it may lay me open to censure on that account, it may not be altogether a waste of your time and attention to listen to it.

Should I not have been entirely mistaken as to this idea, it is possible that my effort may serve as a hint to other architects, whose stores and reminiscences are of greater value than mine, and lead them to follow my example. Then, if such could be induced to look over the contents of their shelves, and to dip into the pages of their diaries, and extract thence for the benefit of their juniors some of the details and particulars of their professional experience of greater value for instruction than mine can pretend to have, I shall feel more than rewarded for the little trouble that the preparation of this paper has cost me.

The first impression that I received upon my addressing myself to the task I had set myself, was, I confess, one of considerable depression; for I found, after searching into my portfolios, that the majority of the drawings contained in them had apparently been begun, at the commencement of the several works, perhaps rather too elaborately, in an excess of zeal, but that during the progress of the buildings pressure of time and other circumstances seemed almost always to have compelled a gradual contentment with less degrees of finish. The result was that there were in fact very few of the drawings that had ever attained the character that in theory I had aimed at, or that were in a condition fit to be exhibited.

Nevertheless, by the zealous assistance of the gentlemen in my office, I have been enabled to complete a moderate number of these working drawings—sufficient at any rate, I hope, to convey

to you the principal of the points that I wish to bring before your notice. To the editors of the several professional journals also I owe sincere thanks for the courteous and liberal manner in which they met my proposals that they should reproduce on a reduced scale some of these drawings to serve as illustrations to the reports of my lecture in their respective pages. It may also be noted that it is but recently that this could have been done to the extent and in the manner it has been, but for the great advance in the means for such reproduction that science has rendered possible.

"Working drawings" being the nominal subject that I have now to deal with, I shall commence by making some few remarks upon their features and characteristics.

Working drawings may be subdivided into what may be termed, for the sake of distinction, *general working drawings* and *detail working drawings*. The former of these are usually drawn to the scale of one-eighth of an inch to a foot, except in cases in which the buildings are very extensive, when the scale of one-sixteenth of an inch to a foot is frequently used. Neither one nor the other of these scales, however, is in my opinion the best adapted to set off to advantage a design, the detail of which is of a character at all elaborate. Then the scale of one quarter of an inch to a foot is altogether too large for general working drawings, and it makes the drawings quite too cumbersome in size. In my opinion the scale of three-sixteenths of an inch to a foot is the one which gives the best effect for such general drawings as it may be thought worth while to take some exceptional pains with, although it is true that it is somewhat troublesome, and is objected to by builders on account of its being unusual.

For detail working drawings the scale of one-half inch to a foot is the one that is the most suitable for brickwork and stonework, and that of one inch to a foot for woodwork generally; but for roofs, and such like designs in wood of large size, the half-inch scale will suffice. Mouldings and the like should, however, be always drawn out full size; as it is not safe to allow workmen to enlarge them for themselves from drawings to smaller scales, there being considerable risk of the delicacy and essential features becoming more or less spoiled during the process.

The term "working drawings" distinguishes those which are intended to direct the actual execution of the work from either probationary drawings, for which less accuracy and more artistic effect is necessary, or from drawings of executed work, such as may have to be done by students for exercise or in competition for medals and prizes. The minute and painstaking character expected in the latter cannot be maintained in ordinary actual practice.

For working drawings therefore the primary essential is clearness rather than technical excellence or beauty of draughtsmanship. For this reason the representation of shadows is to be avoided in them, and I need hardly say that backlining, once so fashionable, and which is but an affectation of proper shadowing, is quite inadmissible. Colouring to working drawings should be used simply for the purpose of distinguishing the different materials, and the same colours should always be used for the same materials. The printing and writing should be distinctly legible, though of course it is desirable that it should at the same time be somewhat characteristic.

Economy in the preparation of working drawings is a most important point for consideration, both as regards the labour and cost. For though an architect is only supposed, according to the regulations for professional custom of the Institute of Architects, to be obliged to supply one set of drawings and one set of tracings, these fall far short of the usual demands in practice; nor is it often, according to my experience, politic, if possible, to seek or obtain additional remuneration for further copies, although fairly chargeable. My own custom in this respect is to keep my working drawings in pencil, so that I may be able at any time to make any alterations required therein. From these pencil drawings I have tracings made, in strong black ink upon white tracing-paper, whence other copies may be taken and multiplied by means of photolithography. I am thus enabled, at a comparatively small expense, to supply as many sets of the working drawings as may be called for by employers, surveyors, builders, or societies. By the same means also, especially in the case of old buildings destroyed, restored, or altered, the folios of the Institute and this Association may and should be enriched.

You are aware that it is upon the character of his working drawings, rather than upon that of his preliminary sketches, valuable as an able and artistic treatment of those undoubtedly is, that the ultimate reputation of an architect depends. It is those only that actually affect the work itself. Upon the clearness and accuracy of the working drawings alone do the employer's interests and immunity from disputes and extra charges depend, so that they require, and should receive, all the care and attention that can be bestowed upon them. Doubtless, therefore, you have often determined that, come what will, these at least should have your own personal work, and that they should represent you, as it were, and all that is in you, and that their study and completion should precede the execution of the contract. But, alas! man proposes, but fate and circumstances too often dispose otherwise, and you frequently find to your disappointment and regret that after complete and elaborate sets of both general and detail working drawings have been prepared, it has proved that it has only been to be

\* Paper read at the meeting of the Architectural Association, November 24, 1882.



set aside in consequence of some change of purpose, with or without reason, on the part of your employers, and then that the whole work has to be done over again. You thus get to learn by experience that circumstances compel some compromise between the perfection of working drawings that you would yourself desire, and such comparative imperfection as may just suffice to secure the work being properly carried out. This it need hardly be said will not reach that standard of excellence which is so often attained by the student competitors for the medals and prizes of the Institute and this Association.

Sometimes, instead of letting the preparation of the detail working drawings follow that of the general ones, so as to be simply explanatory thereof, I reverse the process, making my designs at once, after mere preliminary sketches, to the scale of a half-inch to a foot. This plan reduces the working-out of the smaller-scale general drawings completely to a mere mechanical operation, so that it can be done without any personal supervision on my part, and yet with certainty that the character intended for the detail will be preserved throughout. By this means my own time and attention is able to be concentrated upon those parts of the work which alone demand thought and design; the rest being left to be done entirely by others. I was able by this means, in the case of the competition for the Law Courts, to dispense with any increase of my staff, and not to disarrange at all my ordinary practice; whereas I remember to have heard almost all my competitors complain of having suffered severely in both those respects.

It is time now to descend from generalities and to speak of particulars, and I think that the most convenient way of arranging the matters I propose to bring before you will be in what may be termed brief, isolated, autobiographical passages, placed in chronological order, which will admit of occasional divergence as subjects appear to suggest themselves. My excuse for these must be that in reality an architect's life is represented in his works, and his works constitute all that in his life is worth any record at all.

Most of my early professional experience was obtained in the diocese of Llandaff, in connection with its diocesan work. In the year 1851, the period of my apprenticeship to Professor Donaldson having expired, I spent three months in a rapid sketching tour upon the Continent, in companionship with the late Mr. Thomas Hill. Immediately after my return I was fortunate enough to receive a commission to build an hotel at Southerndown, a small watering-place on the coast of South Wales, near Bridgend in Glamorganshire. After my first visit to that neighbourhood to inspect the site, I stopped on my way homewards to see the cathedral at Llandaff, which was just then emerging from the condition of ruin and spoliation in which it had lain, in picturesque confusion, ever since Mr. Wood's unfortunate effort to convert it into the semblance of one of his favourite assembly-rooms of his own town of Bath had happily been but partially carried out. I was then courteously shown over the works in progress by Mr. John Prichard, the diocesan architect, under whose immediate charge they were. Shortly afterwards I received an invitation from that gentleman to join him in partnership, an offer which I accepted, and this led to my going down to reside with him at Llandaff.

The cathedral of that little city (which is in fact only a suburban village in the neighbourhood of the town of Cardiff), with its lovely and refined Early English proportions and detail, thus became my constant study and source of inspiration. Its beautiful western front in particular, the exterior and interior of which form two distinct compositions in perfect harmony the one with the other, roofless and festooned with ivy when I first knew it, seemed, as it still seems, to me to be a model for graceful proportion and refined treatment of mouldings. I quite revelled in its loveliness, thinking it to be one of the choicest examples of that style which England has made specially its own, and of which it may be fairly more proud than of any of the others which it shares in common with other countries of Christendom. The carved foliage of the interior of the cathedral was to me a continual source of delight. It is most sparingly used, as if it were jewel-work; and indeed it is as precious as if it were so. It is of the finest type of Early English foliage, the flow of the lines of which have remarkable grace and freedom; the stems are clear and vigorous, and the trefoil-shaped leaves are excellent in outline and surface modelling. I sent up a collection of casts taken from them to the Architectural Museum, and there is nothing to my mind among their treasures to surpass or even to equal them. This carved foliage of Llandaff is, in my opinion, the perfection of that particular class of work which is seen in its very earliest stage, budding out as it were of the simple Norman cushionwork of the capitals of St. David's Cathedral, and which is to be found revelling in its richest and wildest profusion in that of Wells, but nowhere with such developed fulness and power, and yet with refinement and constraint, as at Llandaff. Very noticeable also are the simple but noble piers of the main arches, with their alternately wide chamfers and groups of triple shafts. The effect of these piers is not improved by the access of richness that is seen in those which have been imported into the church of Llanidloes, in Montgomeryshire, which has just been restored by Mr. Street. They were removed from the now destroyed but once marvellous Abbey of Cwm Hir, in the same county, the number of arches in the main arcades of which are said to have reached the unprecedented number of twenty in

succession. In these piers the triple group of shafts occur on each face of their octagonal piers, and their capitals are all united in one rich band of foliage of the character of which we are speaking, but of inferior excellence to that at Llandaff.

The ordinary diocesan work, in which I became at once fully occupied, consisted largely of church restorations, and to my share fell principally those works which were situated in the archdeaconry of Monmouth, under the able and vigorous direction of its energetic archdeacon, whose habit it was to map out his district, and to appoint a visitation to various churches, the dilapidated condition of which acquired immediate attention, and to take me with him on those occasions. Upon our reaching one of these, possibly some few minutes later than it had been intended, he would first ask me to note its deplorable state, which I could not but admit was tolerably obvious. He would then inquire of me what could be done with it, premising, however, that there was no money to be found. To this problem I would reply that its solution and the course to be pursued was far less clear. Nothing daunted, he would then explain to the assembled vicar and churchwardens that he had brought me there simply in my capacity of diocesan architect; which meant that they might set their minds at ease, for the present at any rate, on the subject of fees; but that, as I happened to be there, I might as well take the plans and particulars of the church, so that in case I should be sent for upon some future occasion I might be prepared. He would then allot me about half-an-hour, proffering me his own assistance, when wanted, as a tapeholder. Under such pressure I soon learned to systematise proceedings, first sketching in succession the plans, elevations, sections, and details, and then noting down the necessary dimensions; this having done, we proceeded to perform the same task at the next church upon our list. On my return home I plotted out these several sketches, and though of course, when actual work was contemplated at any of these places, it became necessary perhaps to make another and more careful survey, much time had been saved, and the opportunity given for preliminary consultations.

I soon got to love these modest Monmouthshire churches, discovering that their extreme simplicity was completely in harmony with their surroundings, and preferable there to the comparatively greater pretentiousness of modern work generally, and even old work in richer districts elsewhere. I have often in consequence attempted to work on the same general lines under similar circumstances, particularly in cases where commissions have been linked to like cautions as to there being but little money to expend; and though the working drawings of such structures may look somewhat bare and uninteresting, one often has the satisfaction of finding the result not altogether as bald as had been feared.

Now, the normal condition of these churches was that their roofs had become decayed, their pins had drawn, and the ties from wall to wall generally removed altogether. The walls had consequently yielded to the outward pressure of the roof, and having been originally built with mortar made with the loamy sand, the only material of that nature formerly procurable in the county, the lime had been killed, and the mortar had become little better than dust. They were usually rent at all the angles and elsewhere, and were in such a condition that a vigorous push would have overturned them. The general character of the roofs of these churches was that known as half-barrel or waggon-shaped: that is, constructed of framed and braced couples, without principals or purlins. The braces were usually curved, and served as cradling for boarded ceilings of segmental, semicircular, or slightly pointed form, and were decorated beneath with moulded ribs, with carved bosses at the intersections, and there were usually moulded cornices of considerable depth. Most of these churches had doubtless once had massive tie-beams spanning from the opposite wall-plates, which had in course of time become decayed at the ends, and been removed and no others replaced; hence the perilous condition into which the whole of these structures had fallen.

Some of these roofs had certain of the pairs of couples wider and deeper than the rest, to serve as principals; these were moulded on the underside and carried moulded purlins. A good example of this class of roof exists at St. Lythan's, in the county of Glamorgan. It was not ceiled, but may have been intended to have been so, panelwise, between the purlins. I remember admiring the refined effect of this particular specimen, which had somewhat peculiarly curved but elegant braces, so much that I followed its type in designing a new roof for the chancel of Lampeter Velfry, in Pembrokeshire. Another interesting roof existed in the last stage of decay at Oldcastle, in Monmouthshire. As it was absolutely necessary entirely to renew this, I reproduced the general character of the old principals, which were peculiar in form. This was an example of an open roof with principals and purlins. The collar was very high up, and arched braces supported it and connected it well with the principal rafters.

There are now so many different theories on the subject of restoration that I cannot hope to have satisfied all. Mine, then, was to replace matters as nearly as possible as I found them; and I have considered it a compliment when I have been told, as I was by the late Sir John Harding in connection with the restoration of Rockfield Church in Monmouthshire, that had he not been informed he should not have known that anything had been done



to it. I was but recently told, however, by a zealous member of the Society for the Protection of Ancient Buildings, that I am only one of the more destructive members of my craft in consequence of the confusion thus wrought for future archæologists. There are in truth so many and grave questions that continually arise in dealing with old buildings, and so many ways in which each of these may be viewed, that an architect's position in relation to such matters is a difficult one. He has to decide what should be done, and that with the certainty that, whatever his decision may be, it will please few and be disputed by some. His only consolation is, that if his censors be asked how they would have acted under the circumstances, they would either have done nothing, which he was not in a position to do, or that each would have done something different to the rest; so that therefore their criticisms neutralise one another. In self-defence I can certainly aver that these village churches then stood, as it were, on their last legs, and that the newly-arisen zeal of the Church would not brook their total loss. After all, an architect is but the servant of the public, and though he may be able to, and, if so, should, influence the opinion of his employers, he is bound to defer to that in the end.

I have referred above to the subject of roof tie-beams, the essential necessity of which our forefathers frankly accepted, as was their wont, and tried to make the best of. The modern mind, however, seems to abhor ties, and one of the problems that I have continually had to endeavour to solve has been how to construct church roofs without any visible ties, and that often to cover walls of less than mediæval thickness, and of more than ordinary spans. In Kent and some other of the south-eastern counties half-barrel shaped roofs are not infrequent, but they are generally provided with efficient supports in the shape of tie-beams with king-posts and braces. There is one of early date, well moulded, at Salmestone Grange, near Margate. At Eythorne, near Dover, I succeeded in reproducing all these features in the new roofs, which I found it was absolutely necessary to substitute for old decayed ones. But at Great Kimbale, in Buckinghamshire, when I put a similar roof to the chancel of the parish church, it is even now in contemplation to cut away and dispense with the obnoxious tie-beam and king-post, because it happens, from some points of view, to appear to cross the upper part of the eastern window. This leads me to notice and to utter a protest, however unavailing it may be, against the absurd modern craze for an undisturbed vista from one end to another of our cathedrals and churches. All mystery and effect is thus sacrificed, and the interiors of our ecclesiastical buildings become as bald and as bare as those of barns.

In the church of Great Kimbale, to which I have alluded, I met with the worst example in my experience of walls having been thrust outwards by the spreading of their roofs, but I succeeded in restoring them bodily to their proper upright position, without having them rebuilt, as at first appeared necessary. This I was able to accomplish by the simple expedient of having them hauled up by ropes attached to windlasses outside passing through the opposite openings, after having previously disengaged the bases of the several columns of the arcades, and subsequently underpinning them.

It is noticeable that all these old church roofs were constructed, however rudely, in oak, and that they have owed their duration to the extreme tenacity of that timber, in spite of all the adverse circumstances to which I have called attention. They have in very many cases been renewed or altered at a far later date than the ages of good church architecture, probably in rude imitation of the former ones, but with inferior construction; or perhaps the timbers of the old roofs had become decayed at their feet only from contact with the damp walling, and their ends having been cut off, they have been reused and reframed, and so made to do duty again for a roof of lower pitch than the original. This may generally be discovered by finding the marks of the previous roof against a tower or the end gabling, and I lately found this to have been the case at the parish church at Betchworth, in the county of Surrey. In this case, also, disused and displaced mortice-holes betrayed the fact, together with the construction being inferior to any real mediæval work, the struts having been only nailed to, and not housed into the rafters and collars. The roof had been covered with exceedingly heavy stone slabbing, which had been improperly bedded completely in mortar, which by capillary attraction had rotted the lathings of the tiling and the ceiling between the rafters; these, again, being too close to each other, had left but little intermediate air space (another frequent cause of similar disaster). The roof timbers had in consequence sunk under their weight, and become dislocated at their points of junction, and the walls had yielded to their pressure, and so the complete restoration of the whole had become imperative.

The present almost prohibitive cost of oak, and difficulty of getting it seasoned, import another element for consideration into this already sufficiently vexed question of restoration; for the character of construction, what was suitable to that denser material is not so when fir has to be used instead. As an example, therefore, of the manner in which I have endeavoured to solve this problem in connection with that of the non-tolerance of ties, I may call your attention to the working drawings which I have just prepared for this particular case at Betchworth. In the first place, I relinquished the use of the framed couples alone, which I consider is

only desirable when oak can be obtained. For this treatment I have substituted one in which principals are introduced at moderate distances apart; and, to avoid the intrusion of ties, I have had to place the collars high up. I have made continuous curved braces to sustain them, and by connecting them thoroughly to the principal rafters reduced their thrust to a minimum.

I find, however, in looking over my folios, that in general I seem to have preferred to adopt, whenever I could, roofs with half-barrel shaped ceilings rather than those left open to the ridge, as in the last case described. The reason is, that I consider the former the better adapted to maintain an equable temperature within buildings, and to give greater facilities for ventilation by means of the space that is left in them between their outer covering and the ceiling below the collars and braces, and also that they transmit better to a distance the sound of the voice. Then, again, the distance between the covering and ceiling gets rid of the danger of dry rot, already spoken of as very likely to occur when the covering is of tiles bedded in mortar or cement, and there is but little space for air between it and the ceiling, which, if of plaster, is impervious, whether this be between or below the rafters themselves.

And yet the outer covering of roofs should be made impervious, or else it is but of little use to attempt to warm by artificial means the interior of a church. With the ordinary coverings used for the sake of economy, the heat evaporates through them almost as fast as it is generated, and the air of the interior, getting rapidly cooled by contact with the cold covering, descends, and causes the draughts so bitterly complained of by congregations. The least that ought to be done is to cover the rafters with stout boarding, ploughed and tongued, with asphalted felt laid upon it, and above them battens about 2 inches by 2 inches should be placed diagonally to brace the whole roof, and to allow any rain driven in under the tiles or slates to pass down to the eaves. The tiling or slating battens should be fixed upon these. I should even advise the boarding to be doubled, and to have plain felt between the two thicknesses, as well as the asphalted felt above them. Then the outer covering can be laid, as it should be, without mortar or cement.

The construction of this class of roof will be that in which principals are used with purlins to support the rafters, and cradling to carry the ceiling; and I shall call your attention to the working drawings of several of such roofs in connection with some of the buildings I am about to mention. Some of these drawings are to be reproduced.

At Great Yarmouth I have had considerable experience in connection with half-barrel shaped ceiled roofs of large spans. It was in the year 1862 that I received the commission to undertake the restoration of the noble Church of St. Nicholas in that town. This, as you are doubtless aware, is one of the largest, if not the largest, simple parish churches in existence. The special peculiarity of it is that all its aisles have the immense internal width of about 40 feet. This commission was the more gratifying to me as I had been entirely unacquainted with the place and its inhabitants until I was informed that the committee had decided upon offering the work to me. I mention this fact because, although for very many years my relations with this work were of the pleasantest, and I was permitted to control all that was done at the church, in order that one mind might guide the whole, after a time that rule became relaxed, and I resigned in consequence. I am glad, however, to learn that it has lately fallen into the able hands of Mr. Pearson, under whom I trust that the work may be satisfactorily completed.

Some of the roofs and walls had fallen into a similar state of dilapidation to what I have been describing in other cases, and from the like causes. The first of the roofs that I had to replace there was that of the chancel, which has a span of only 25 feet. For this it was desired that I should, and I was able to, follow the old construction of framed couples, and to employ the same material as before—that of oak. But when, later on, I had to undertake that of the vast south aisle of the nave, I found that practically neither were admissible, nor could I venture to introduce there any ties, as there had not previously been any. I therefore worked out the problem afresh, with fir for the material, and with principals and purlins and cradling for the ceiling, the result of which was entirely successful.

This church of St. Nicholas, though very impressive from its great scale, is not satisfactory, in that its nave and chancel are less in width than their respective aisles, the former having about 25 feet span and the latter 40 feet. In the new church dedicated to St. James, at the southern extremity of the same town, which is now in course of erection from my designs, I tried, while keeping somewhat to the same scale, to correct this disproportion, and so made the width of the central compartment about 35 feet and that of the aisles 25 feet. The site that I had to deal with in this case was almost square, and I therefore adopted the Greek cross as the type for its plan. There are but four columns in the interior, and the central crux compartment is covered by a segmental dome of concrete carried by the four large arches and four smaller ones spanning the angles of the crux in place of pendentives. This it is my intention to have decorated with Rust's mosaic, as I have



shown in a view of the interior of this church, which has been reduced by Messrs. Sprague, by their new photographic process, for the journal of *The Architect* as an illustration to my paper in its pages, from a large coloured drawing of it by my friend Mr. Howard Gaye. In the pulpit, seen in the drawing, I used the same material of mosaic in connection with decorative stoneware from the Fulham potteries, resting on a base of polished serpentine. Such materials, some specimens of which have been sent by Messrs. Belham for your inspection, I have found to give facilities for the introduction of constructional and durable colours into buildings, the want of which I had long previously felt and deplored. The interior of this church is lined with buff-coloured brickwork, diapered with red, and its exterior is likewise constructed with considerable variety of colour in flintwork and red and black brickwork and stone dressings. The roofs are of the character of those described at St. Nicholas'; and indeed in the general size and scale of the parts I have tried to adapt in St. James's Church such of the characteristics of its mother-church as had impressed me with admiration, and had appeared to me to be desirable to introduce into the ecclesiastical architecture of our own time.

(To be continued.)

## THE MOSAICS OF RAVENNA.\*

By PROFESSOR J. BALDWIN BROWN.

THE Mosaics of Ravenna have several points of interest for the student of art and of architecture. There is first the interest of their subject. They are the finest existing examples of a period of Christian art which has a special character of its own. They are also interesting from the point of view of style, as exhibiting an attempt to create a new manner of treatment in art based upon the classical, but developing into forms suited to the special circumstances of the time. Thirdly, there is their connection with architecture, and their general effect as a decoration for the interior of large buildings.

The subjects of these mosaics, and to some extent the style in which they are executed, can be determined by the excellent photographs which are now to be obtained of them, but their general decorative effect is a matter which can only be judged of by actual observation, for there are no works which have a more close relation to their surroundings or have been more specially designed for a particular place and use. It will be my endeavour in the present paper to touch upon these three aspects of the Ravenna mosaics—their position in Christian art history, their artistic style, and their character and merit as examples of grand architectural decoration.

The works we are considering belong to the second period of Christian art, after Constantine the Great had formally recognised Christianity as the religion of the Empire. Previously, during the first three centuries of our era, Christianity, if not actually persecuted, had not been sanctioned by authority, and had no worldly position. Christians might and did erect churches by the side of the Pagan temples—we read of forty such at Rome—but all open monuments of the time were destroyed in the Diocletian persecution of the year 303; nor do we possess any certain remains of above-ground Christian buildings before the time of Constantine. All that remains to us of the art of the earliest period is to be found below ground in the catacombs of Rome, Naples, Alexandria, and other places, and consists mainly in the painted decoration applied to the walls and ceilings of the small sepulchral chambers. This decorative art of the catacombs answers exactly to the temper and the outward circumstance of the Christian community. The spaces to be adorned were of a very small size, the tomb chambers or cubicles seldom measuring more than 10 or 12 feet square; and the light was either artificial or admitted through long square shafts running to the upper air. A few figures and devices on a limited scale, and hastily though often skilfully executed, are all that these underground chambers have to show; and their interest for us resides rather in their spirit than in their form, tasteful though this may often be. The spirit of these paintings is an interesting testimony to the temper of the early Christian Church. They are of a uniformly bright and cheerful tone, without a single trace of either the solemnity or the sadness of the representations of later Christian art. The form of the art is Classical, and the system of decoration very much the same that we find in the wall-paintings of Pompeii and Rome. Nor is this merely a case of borrowing; the feeling is in both cases to a great extent the same. The Pagan was familiar with the idea of the Divine manifesting itself in outward form, and with the joy which was in this way shed abroad. The Christian artist in like manner had his mind filled with the gladness resulting from the Divine manifestation, a gladness which pervaded all things, and could not be denied expression even in the chamber of the dead. Hence the decorative forms of the Classical painters, wreaths of flowers, fruits, gaily-feathered birds, figures of the seasons and symbols of all the varied life of nature, appear as if in their natural place

upon the walls and roofs of these cubicles. For all that lay beyond this simple joy, all that was serious and distinctly Christian in their habits of thought, the Christian artists had no means of expression ready, and had to content themselves with symbols. The artist of the catacombs was unwilling or unable to depict Christ as an historical personage, or to portray scenes from the life of the past. Thus art, when it entered these regions, became symbolic. Christ's existence and presence were figured by the well-known symbol of the fish; His attractive power by the angler who draws a fish from the water; the healing stream of salvation by water from the rock that Moses is striking; or, again, the homage of the world by the adoration of the Magi. Scenes from the stories of Daniel and of Jonah are used to shadow forth Divine truths; but the most frequent representation of all is that of the Good Shepherd, often with the lamb on His shoulder, typical of Christ and of His care for His flock.

Works like these are full of charm and graceful meaning, but are not serious attempts to deal with Christian themes in an artistic spirit. This attempt was reserved for the time when the first paradisiacal days of simple Christian fellowship were at an end, when the Church stood forth as a regularly-constituted power in the world, and had organised itself on a complete hierarchical system. We then find an entirely new style of art on a grand monumental scale and of a thoroughly public character, suitable to the altered conditions of the times after Christianity became the State religion. The aim of this art is to exhibit the forms of Christ and of the saints in all the majesty which art would lend to them before the congregation, and to display on the walls of the churches some of the more solemn scenes from the sacred narrative. The difference between this art and that of the earlier time is much the same as that between the lyric song and the epic. The art of the catacombs is like a song, the simple expression of the Church's joy and contentment, with poetic allusions to the Christian doctrines. The art of the period after Constantine is like the epic in that it is directed to an audience, and aims at bringing before the people the grand, heroic forms of the past age for all to reverence and to imitate. But if the art of this period, which is the one represented by the Ravenna mosaics, differs from that of early Christian times, no less strongly does it contrast with the art of the succeeding period, that of the Middle Ages proper. We find ourselves then in what may be called the dramatic age of Christian art, the age when representations of an intense and tragic kind become frequent, and the sympathies of the beholder are invoked by paintings which depict with the utmost dramatic force the sufferings of Christ or the future retribution of the wicked. It is very significant that though Christ, either enthroned in glory or living and working upon earth, is the foremost subject in the great mosaics of the period after Constantine, we find no representation of His crucifixion or of those scenes from His passion in which His actual suffering is portrayed. Such scenes were alien alike to the childish temper of the early Christian paintings and to the solemn dignity of the mosaics, in which classical dislike to represent the pain and humiliation of the great is still very apparent. The Crucifixion and similar scenes do not come into fashion, at any rate in Italy, till about the eighth century, and it is not till the eleventh that the artists try to unfold all the tragic horror of the situation. The Last Judgment, again, one of the most impressive subjects of the later mediæval artist, is not known till the latter half of the eleventh century, and it is only then that the religious artists descend to depict those scenes of horror from which the painters and mosaic workers of the earlier time would have shrunk in disgust.

What now was the origin and character of this new artistic movement of the days after Constantine? Some notices in the literature of the time, as well as existing remains, enable us to answer the question. It was an age of the utmost architectural activity: one of the great building ages of the world. The emperors from Constantine onwards vied with each other in erecting magnificent temples for the Christian faith. Many of these remain to this day, though often stripped of their splendid adornments. We can still wonder at the colossal proportions of the restored basilica of St. Paul's without the walls at Rome, with its five aisles, its eighty columns, and its 400 feet of length; or admire in a smaller but well-preserved basilica, like St. Sabina on the Aventine, the beautiful proportions and the air of convenience and fitness of the churches of this age. Or, again, we can study the system of circular and polygonal churches, with their bold cupolas and ingenious divisions of space, of which St. Sophia at Constantinople is the masterpiece, and San Vitale at Ravenna and the stately and beautiful San Lorenzo at Milan are more accessible and better-known examples. Could we see before us now the interior of the church of St. Sophia as it left the hands of the architects of Justinian, we should have before us perhaps the most beautiful and splendidly adorned temple ever raised to the service of religion. These numerous and extensive buildings must of course have led to a great demand for decorative art of the finest kind. Literary notices tell us that provision was made for supplying it by the grant of special privileges to artists. A law of Constantine states that "leisure is required for learning the arts, and if this is granted, artists will become more skilful, and will teach their sons their profession"; and

\* Paper read at a meeting of the Edinburgh Architectural Association on November 22, 1882.



proceeds to announce certain exemptions in favour of artists, first architects, then painters, sculptors, and mosaic workers. So popular did this profession become, that we hear from a writer of the fourth century that in his time the young men forsook the schools of the rhetoricians and philosophers, and streamed in crowds to the studios of the painters. If we ask what models were set before these students, we find the answer, so far as the school of Constantine is concerned, in the fact that Constantine collected together in his new capital a vast number of the finest statues of antiquity out of Athens and the other Greek cities, and the influence of these fine models is unmistakable in the mosaics of the time.

This new development of art is generally called Byzantine, for it was in the new capital of Constantine that it attained to its utmost splendour. There can be no doubt, however, that the same style of art flourished in the other great towns of the Roman Empire, where fine architectural monuments were constantly erected. Rome had a school of mosaic workers that lasted on throughout the Middle Ages, and the mosaics of Ravenna may as well have been the productions of local artists as of imported talent from Rome or from Byzantium.

Imperial patronage then, and the study of good antique models, gave the necessary impulse to this new style of art, which we may call Byzantine. The spirit of it was determined equally from within by the condition of the church of the time. Even here the feeling among ecclesiastics was for a style of art which should answer to the present greatness of the church, and impress the minds of the worshippers with the grandeur of the Christian legend. A few words from a writer of the middle of the fifth century convey well the ideas of church decoration of the time. The old system of ornament, with a miscellaneous multitude of representations, must, he says, be done away with. No more birds, quadrupeds, insects, and plants, together with a crowd of small crosses. This is a silly and a childish style. What ought to be seen in the sanctuary at the eastern end is a single cross, as one cross only brings salvation to men. The inner walls of the church must be covered with scenes from the Old and New Testament, from the hand of a first-rate painter, in order that—and this is the significant point—"those who are not able to read may be reminded of the Christian virtues of those who have served aright the true God, and be inspired to try and imitate them."

This somewhat lengthy introduction has been necessary in order that we may understand what there is to be looked for in these Ravenna mosaics, which are, as has been said, the most complete example of the style of art called by the general name Byzantine. We shall find in them no graceful playing with the symbols of the faith, but the presentation in epic simplicity and breadth of the historic forms of the heroes of Christianity. We shall find no attempt on the other hand to excite dramatic interest, or to harrow the feelings by the sight of the sufferings of thirst, or the torments of the condemned, but a desire rather to chasten and elevate the minds of the beholders by the spectacle of Divine majesty and of humanity triumphant over evil and in the repose of victory.

In the style of these works again we shall see the result of an intelligent study of antique models, which enables the artist to create types differing from anything we find in the antique, but posed and draped in a way at once natural and dignified. Thirdly, we shall note in them examples of what has been well called the "unerring mediæval instinct of style." However faulty is the drawing of the decorative artist of the Middle Ages, he seldom makes mistakes in what is after all the most important part of his work—his general effect of tone and colour, and still more the suitability of his forms to their use and to the place they occupy. There are certain qualities in decorative work in which the instinct of artists in early times like these seems to have led them infallibly right, while the highly-trained painter, sculptor, or architect of the present day is constantly liable to go wrong. It seems as if the decorative instinct belongs in its perfection to the unsophisticated workman, and becomes weakened in proportion as he gains mastery over form and is able to express more and more in his work of an intellectual kind. At any rate (though this may be somewhat too broad a statement) there is no doubt that the most accomplished artists of to-day may learn a good many useful lessons in decoration from the mosaic workers of Rome and of Ravenna.

Ravenna lies on the east coast of Italy, at the upper part of the Adriatic. In the time of Augustus it was an important seaport and possessed a suburb—Classis—connecting it with the harbour, but the sea is now nearly five miles away, and the only relic of the harbour-town is the old basilica of St. Apollinare in Classe, three miles outside the walls. The historical importance of Ravenna belongs to the 250 years during which it took the place of Rome as the seat of empire in Italy. The Emperor Honorius removed his court to Ravenna in 405, while Italy and Rome fell under the power of Alaric and his Goths. For nearly a century the rulers of the Western Empire remained in safety amidst the marshes of Ravenna, the government during the first part of the time being in the hands of the great daughter of the Emperor Theodosius, Galla Placidia. At the close of the fifth century Ravenna, with the whole of Italy, passed under the power of the Ostrogoths, whose famous King Theodoric ruled in Ravenna for three-and-thirty years, till

his death in 526. In 539 Ravenna again became the seat of Roman Imperial power, when Italy was reconquered by the generals of Justinian, the head of the Eastern Roman Empire at Byzantium. It was now the seat of the exarchs, or viceroys, of the Eastern Emperor, who exercised from here a nominal rule over Italy till the time of the establishment of the Frankish power in the eighth century.

The artistic history of Ravenna is closely connected with the foregoing facts. It has three great epochs answering to the dominion of Galla Placidia, of Theodoric, and of Justinian, under all of whom grand churches were erected and adorned with mosaic decoration. Latins, Goths, and Byzantines have thus all had a hand in the Ravenna mosaics, but we do not find any striking difference in the works they severally are responsible for. All were alike Christians, though the Goths adopted the heretical form of Christian belief called Arianism; and all alike took for their subjects the grand Christian themes suited to the taste of the times. In the artistic merit of the works a difference is to be discerned, due to the fact that the art, like all the forms of art in the Early and Middle Ages, was an art of decline. Both in the catacomb paintings and the mosaics the same law is apparent—that the earliest work is the best, and the style gets dryer and more conventional as it goes on. Not till the rise of the Florentine and Siene painters of the thirteenth century do we find a really progressive form of Christian art.

Each of the three periods of Ravennese art noticed above is represented by two important cycles of mosaics; that of Galla Placidia by the so-called Catholic Baptistry, or S. Giovanni in Fonte, dating about 430, and the tomb of the princess herself about 440; that of Theodoric the Goth by the Arian Baptistry, or S. Maria in Cosmedin, 500, and most of the mosaics in S. Apollinare Nuovo, 504; while from the time of Justinian we have the splendid series in S. Vitale, 547, and some examples in S. Apollinare in Classe, 549. Of somewhat later date we have other mosaics in the two churches dedicated to S. Apollinare, and mosaics of various periods in the chapel of the palace of the archbishop.

(To be continued.)

## DRAWINGS FOR PATENTS.

THE following regulations respecting the drawings which are to accompany specifications for patents have been prepared by the Commissioners of Patents:—

The drawings accompanying provisional specifications shall be made upon a sheet or sheets of parchment, drawing-paper, or cloth, each of the size of 12 inches in length by 8½ inches in breadth, or 12 inches in breadth by 17 inches in length (but on one side only), leaving a margin of 1 inch on every side of each sheet. The drawings accompanying specifications, in pursuance of the conditions of letters patent, shall be made upon a sheet or sheets of parchment, each of the size of 21½ inches in length by 14½ inches in breadth, or 21½ inches in breadth by 29½ inches in length (but on one side only), leaving a margin of 1½ inch on every side of each sheet. The drawings accompanying complete specifications shall be made upon a sheet or sheets of parchment, each of the size of 21½ inches in length by 14½ inches in breadth, or 21½ inches in breadth by 29½ inches in length, leaving a margin of 1½ inch on every side of each sheet. The copy or copies of the drawings which are to be supplied must be made on good white smooth-surfaced drawing-paper of the same dimensions as the parchment drawing. All the lines must be absolutely black, Indian ink of the best quality to be used, and the same strength or colour of the ink maintained throughout the drawing. Any shading must be in lines, clearly and distinctly drawn, and as open as is consistent with the required effect. Section lines should not be too closely drawn. No colour must be used for any purpose upon this drawing. All letters and figures of reference must be bold and distinct. The border line should be one fine line only. The drawing must not be folded, but must be delivered at the office of the Commissioners, either in a perfectly flat state or rolled upon a roller, so as to be free from creases or breaks.\*

In all cases where the original drawing on parchment is coloured, there must be left, in addition to the above copy, another copy coloured.

**Broadclyst.**—The parish church of St. John the Baptist has been re-opened, after repairs and improvements carried out by Mr. R. Mitchell, contractor, Exeter, under the direction of Mr. Ashworth architect.

\* N.B.—The Commissioners of Patents having decided that the drawings accompanying the provisional, complete, and final specifications of 1876, and subsequent years, shall be copied by the process of photolithography, this regulation must be strictly observed, in order that correct copies may be made. Specifications and drawings filed in pursuance of letters patent should be left at the office of the Commissioners at least six days before the expiration of the time for filing the same, in order that the officers may examine the extra copy of the drawing, and ascertain that it has been prepared in conformity with the rules.



## NOTES AND COMMENTS.

IN consequence of the numerous accidents that have lately occurred, and especially of one at Plaisance a few weeks ago, where several workmen were killed, the Building Department of the Prefecture of the Seine has decided that for the future every time a private individual demands official authorisation either to erect a new building or add storeys or make other additions to a house, the site and soil, as well as the existing edifice, shall be carefully examined by the Municipal Inspector. By the new regulations the inspector must visit the works on alternate days and see that the proper measures of precaution are being taken. This inspection will be gratuitous and obligatory upon the proprietor. Walls showing the slightest sign of weakness are to be pulled down, and the police authorities will be immediately called in to enforce the decision of the inspecting architect, in case the owner either refuses or delays to obey his order. This is a most important decree, for, except as regards frontage, height, &c., each contractor or private owner can at present follow his own devices in the erection of a building.

THE "United Arts Gallery," in New Bond Street, has become the property of Messrs. GOUPIE. They will enter into possession at Christmas, and will no doubt conduct the galleries upon the principle which gave it character. The late directors say that they were loath to abandon their interest in the undertaking, but they failed to discover persons sufficiently competent to assist them in carrying it on. All the works which have been lately exhibited in the Gallery are to be sold on Thursday next and following days, for account of the artists and to liquidate the different interests concerned.

THE managing committee of the French Commission for the International Amsterdam Exhibition, after hearing the report of Comte de SAINT-FOIX, Consul-General of France at Amsterdam, has decided unanimously that, in order to secure a brilliant display of French products, a grant of 300,000 francs shall be demanded from the Chambers as a minimum sum towards the expenses of their section. It may be remarked that this is but another instance of the ever-increasing tendency of the French to an almost helpless dependence upon Government, without whose aid no one seems willing to take the initiative even in matters of the highest importance to private and commercial interests.

THE Birmingham Corporation have resolved to apply for powers in their Consolidation Bill to take over the School of Art and all its property and funds. It is proposed that the cost of maintenance in excess of students' fees, Government grants, and endowments, shall be defrayed under the Libraries Act, which in consequence is to be amended so as to allow of levying a larger rate than one penny in the pound. It will be seen that Glasgow proposes to follow the example of Birmingham. In some towns it might be an advantage for a Corporation to control an art school, but when the character of the majority of the local authorities is considered, we do not think that there would be any gain by a general transference of the powers of existing committees to town councillors. It has yet to be discovered how far the South Kensington authorities approve of the proposed revolution.

THE Managing Committee of the Society of French Artists have held a meeting under the presidency of M. BAILLY. The financial report upon the 1882 Salon was submitted to the meeting, and showed that the profits of this year's exhibition were even greater than those of 1881. The committee elected the officers and directors for the 1883 Salon. M. BAILLY was unanimously re-elected President, and the following nominations were then made:—Vice-Presidents, MM. GUILLAUME and W. BOUGUERAU; Secretaries, MM. CH. GARNIER, THOMAS DE VUILLEFROY, and YON; Treasurer, M. BRUNE. Members of the Conseil d'Administration:—Painting: MM. HUMBERT, TONY-ROBERT FLEURY, BUSSON, BONNAT, JULES LEFEBVRE, GUILLEMET, CABANEL, HECTOR LE ROUX, MAIGNAN, HEBERT, and LALANNE. Sculpture: MM. MATHURIN MOREAU, ETIENNE LEROUX, CAVELIER, and FREMIET. Architecture: MM. BALLU and QUESTEL. Engraving: MM. BRACQUEMOND and DIDIER. This board is absolute in all matters relating to the Salon and its management.

THE exterior of the Paris Hotel-de-Ville is now almost entirely completed, and the decoration and fitting of the interior is being rapidly pushed on. The only scaffoldings that now remain standing are those in the Cour Louis XIV. and round the Tourelles, which have been kept up in order to finish the sculpture. All the rest of the exterior decoration is completed, as also are the decorative carvings and sculptures on the ceiling of the Municipal Council Room; and the statues have all been hoisted to their places on the outside of the building. From the last report issued by the architects it appears that the money spent hitherto amounts to 17,006,574 francs, thus leaving a balance of 8,023,794 francs to be expended.

CONTRARY to general expectation, the post of Director of Fine Arts for France, vacant by the resignation of M. PAUL MANTZ, has been filled up by the appointment of M. KAEMPFEN, an Inspector of the Department. The staff of the Ministry, the theatres, and the accounts will remain attached to this office; while civil buildings will for the future form an independent section, under the immediate direction of M. LOGEROTTE, the Under-Secretary for Public Instruction and Fine Arts.

A "NOTE" which lately appeared in *The Architect* contained a summary of the objections to the proposed Forth Bridge which were raised by Sir GEORGE B. AIRY. A defence of the principle of the design has come from Mr. CHARLES SHALER SMITH, of St. Louis, who has designed several of the colossal American bridges. Mr. SMITH, after examining the objections in order, says that the opinion of those American engineers with whom he has discussed the subject is uniformly to the effect "that the design of Messrs. FOWLER and BAKER is well digested, perfectly practicable as to execution, and thoroughly permanent in character when finished." With regard to cantilevers Mr. SMITH says he adopted them for a bridge 900 feet span and 750 feet above the river after an investigation of the various systems. The cantilever system is less liable to be affected by wind and thermal changes, and decidedly more economical.

FREQUENT instances of subsidence of the surface soil having occurred in several quarters of Paris, the municipal authorities are bestirring themselves with a view to consolidating the sub-soil of the capital. A plan of the great subterranean quarries that extend under the Bois de Vincennes and the neighbouring districts has been prepared, and the necessary work to be undertaken has been settled. The first portion, which consisted of strengthening the quarries under various public thoroughfares in the 13th, 14th, 15th, and 16th arrondissements, over a total length of 2,000 yards, is already finished. In many places it was found absolutely necessary to construct piers, and fill in the spaces between them with ballast, &c. No less than 6,280 cubic metres of masonry and 10,700 metres of earth and sand were used, while the cost of this comparatively small section amounted to about 10,000*l*. It is expected that the complete execution of the work will necessitate an expenditure of many millions of francs.

THE following resolutions have been adopted by a Parliamentary Committee of the Manchester Corporation in regard to the proposed Ship Canal:—"That the hearty approval and strenuous support of this Corporation be given to the project for improving the rivers Mersey and Irwell to the extent necessary to enable ocean-going ships to have direct access to Manchester. That the undertaking and administration of the canal should be so constituted as to be a trust for the benefit of the public in general. That, subject to satisfactory provisions being introduced into the Bill, it is, in the opinion of the Committee, desirable that Manchester and other municipal bodies and local authorities in the neighbourhood of the proposed Ship Canal should be authorised to contribute to the cost of the undertaking, and to take part in supervising the execution of the works, and also in the general management of the Canal, to such an extent and in such manner as may be sanctioned in Parliament." The promoters of the scheme will be glad of the support of the Corporation; but they are likely to consider that too high a price will be paid for it if the Corporation has the power to interfere with the execution of the works. The subscriptions towards defraying the Parliamentary expenses already amount to 38,000*l*.



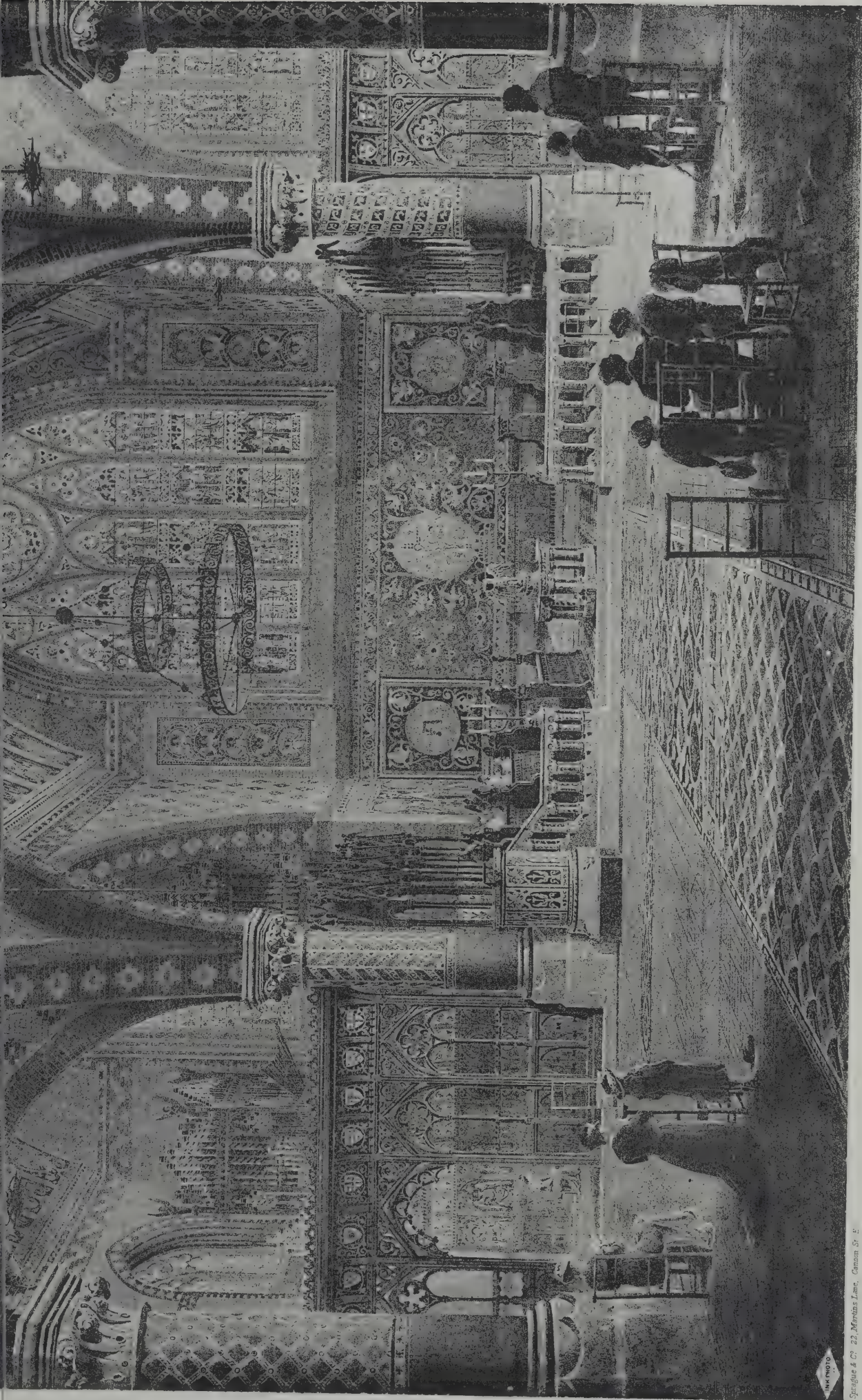




The Architect, Dec<sup>r</sup> 2<sup>nd</sup> 1882.







INTERIOR OF ST. NICHOLAS' GREAT YARMOUTH.  
J.P. SEDDON F.R.I.B.A. ARCHT













A-J-STYLE ARCHITECT.

Sprague & Co. 22, Martins Lane. London, E.C.

HEATHSIDE, WILMINGTON, for JOHN BAZLEY WHITE ESQ<sup>r</sup> JUNIOR.

A.D. 1882.









George & Co. 22, Mark Lane, Cannon St. E.C.

SAN ISIDRO, POOLE ROAD, BOURNEMOUTH.  
MESSRS LAWSON & DONN, ARCHTS.





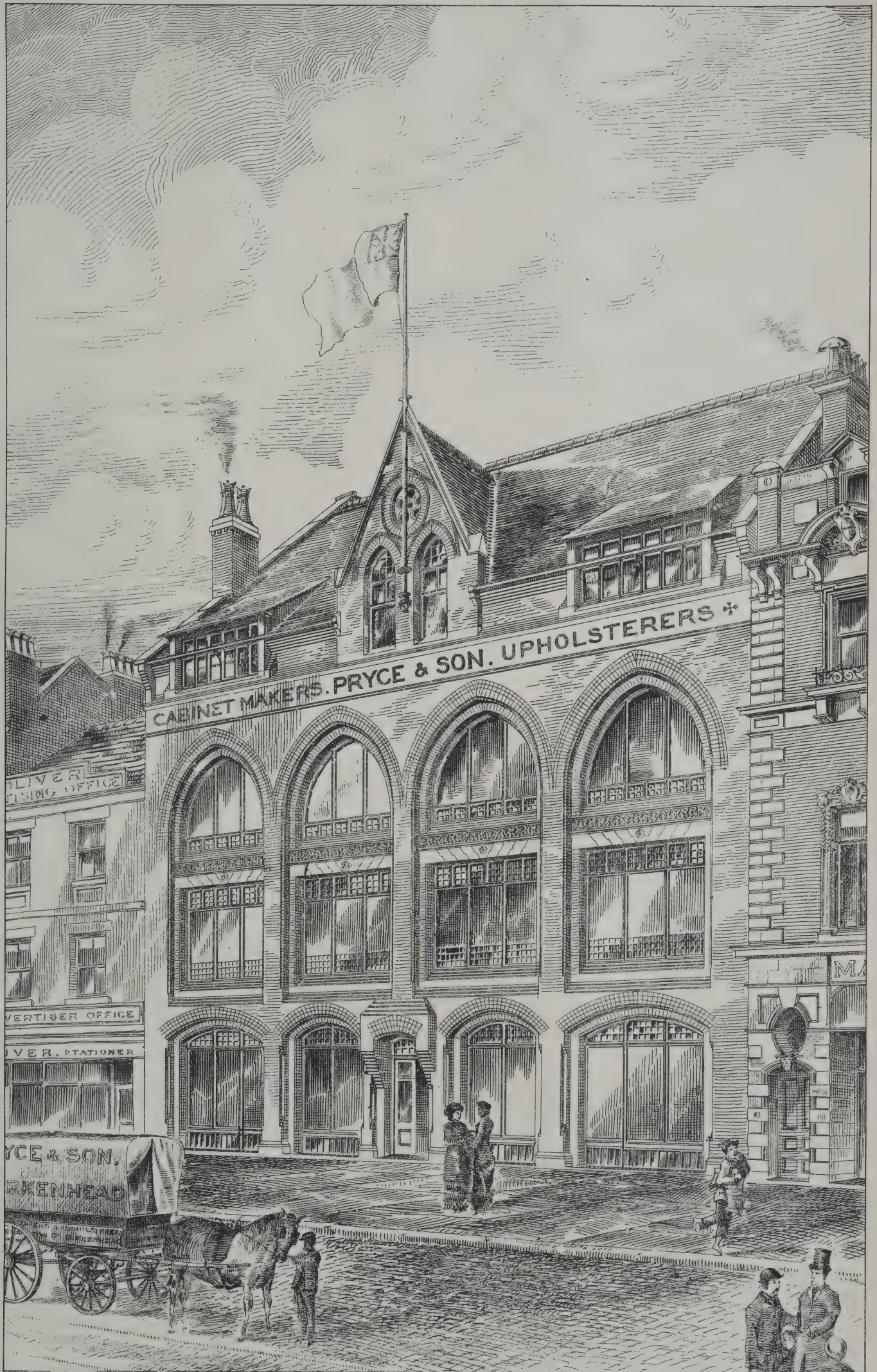
ST JOHN'S MISSION HALL, HAMMERSMITH.  
HUGH ROUMIEU GOUGH, F.R.I.B.A. ARCHT.

Sprague & Co. 22, Mark Lane. Canon St. E.C.









NEW PREMISES, BIRKENHEAD.  
ALEX<sup>r</sup> BLEAKLEY JUN<sup>r</sup> A.R.I.B.A. ARCHT.

Designed by C<sup>o</sup> 22 Martin Lane, Cannon St. E.C.







## ILLUSTRATIONS.

ST. JAMES' CHURCH, GREAT YARMOUTH.

THIS illustration is referred to in the paper by Mr. SEDDON, on page 344.

MISSION HALL, HAMMERSMITH.

THIS building is about to be erected in St. John's parish, Hammersmith, from the designs of Mr. HUGH ROUMIEU GOUGH, F.R.I.B.A., of Queen Anne's Gate. The hall, which will be 109 feet long by 30 feet 9 inches wide, will have frontages to two streets, with entrances from each, one end having platform and retiring-room or vestry, and the other cloak-room and lobbies. Beneath the hall a working-men's club, classrooms, and a kitchen for dinners given to the poor, will be provided. The two principal fronts will be faced with red bricks, with Box ground Bath stone in windows, strings, weatherings, &c. The estimated cost of the building is 2,000*l*.

SAN ISIDRO.

TO borrow a term from the political arena, this is a type of house which may be described as conservative in its principles and general character—a fact probably to be attributed to the irony of circumstances, as few opportunities would slip its owner for displaying an opposite bias. No eclectic promptings have moved the pencil of its author, and the most sceptical might peer in vain for any indications of a gentle penchant for some of the pretty conceits of his favourite queen. Its surroundings are all of an equally familiar kind: the garden and drive in front, the tennis courts behind, the south sea aspect, the views from the flat at the top, with the pines in the foreground and the bay and ships in the distance, are all mirrored as soon as touched upon. In accommodation it is very complete: there are the regulation size dining, drawing, and morning rooms, with the usual complement of kitchens and offices, &c., on the ground-floor. A fine billiard-room is entered from the landing of an imposing two-way staircase immediately opposite the entrance, and four best bedrooms, two dressing-rooms, bathroom, and seven secondary rooms go to make up the rest of the family requirements. The heating arrangements have been effected by hot-water coils in the hall and open fires in the rooms. The walls are all constructed with a 3-inch cavity, and that comprising the front, given in the illustration, is executed with Fareham red bricks, with stone dressings, and portico; Messrs. LAWSON & DONKIN, of London and Bournemouth, being the architects.

HEATHSIDE, WILMINGTON, KENT.

THIS house, the residence of Mr. JOHN BAYLEY WHITE, junior, stands close to Dartford Heath, and considerable additions have recently been made to it from the designs of Mr. ARTHUR J. STYLE, architect, of Westminster Chambers. The external facing of the walls is rough-cast in Portland cement. The staircase and most of the joinery are in pitch pine, and were supplied by Mr. G. HEWITT, builder, of Leicester.

BUSINESS PREMISES, BIRKENHEAD.

THESE buildings have been erected in Hamilton Street, Birkenhead, for Messrs. PRYCE & SON, cabinet-makers and upholsterers. They are specially adapted for this business, all the showrooms and workrooms being well lighted and ventilated.

The frontage to Hamilton Street is 64 feet, whilst at one side the buildings run back 116 feet to William Street, the whole including showrooms, workrooms, and storerooms, all connected by a central "lift," counting-house, stabling, and packing-room, with spacious yard and gateway from William Street. The storage space is equal to 16,000 superficial feet.

The buildings have been so constructed as to have large open floor spaces without obstruction, the beams in most cases being of 30 feet bearing. Patent red bricks and EDWARDS'S terra-cotta have been used for the front, whilst the inside walls are faced with local machine-made bricks, coloured buff.

The total cost is 3,250*l*. The works have been carried out from the designs and under the superintendence of Mr. ALEX. BLEAKLEY, of Birkenhead and London.

## THE ARCHITECTURAL ASSOCIATION.

THE second ordinary meeting of the Association was held on Friday evening, the 24th ult., Mr. E. G. Hayes, President, in the chair. The following gentlemen were elected members:—Messrs. A. Kent, A. R. Manby, G. D. Oakeshott, T. B. Rutherford, F. W. Macey, A. B. Johnson, H. H. Hughes, H. W. Collins, T. R. Clemence, A. Gordon, S. Strudwick, A. Roberts, E. T. Boardman, S. H. Seager, J. W. Stonhold, E. E. Brooks, T. E. Watkins, A. H. Hart, H. Satchell, W. F. Cave, W. J. W. Ferguson, C. W. Wright, H. S. Perkins, W. W. Short, J. Short, P. Thompson, W. E. Potts, H. H. Mew, A. H. Freeman, A. R. Wright, T. Leadbitter, H. Baker, W. G. Nicol, A. W. Bentham, G. W. Knight, C. T. Hornabrook, W. Leek, H. Hutchings, J. A. Whichcord, A. Clark, H. J. Westell, F. Williamson, C. H. Bedells, J. H. Goodman, H. L. Whitley, F. A. Steer, J. E. Still, W. Sheen, junr., W. F. Kelsey, M. Fawcett, E. A. W. Barnard, A. S. Tayler, H. F. Massie, H. H. Flowers, F. M. Elgood, G. L. Strutfield, W. A. Moull, A. B. Atkinson, A. E. Anscombe, and A. J. Ward.

On the motion of the President the annual report was adopted.

On the motion of Mr. J. D. Mathews, seconded by Mr. James Smith, the annual balance-sheet was adopted.

Mr. J. P. SEDDON then read a paper on

## Sundry Working Drawings.

On conclusion of the paper, which is reported on another page,

The PRESIDENT said that such egotism as Mr. Seddon had spoken of in his paper was a kind of egotism that the members of the Association would thoroughly appreciate. It was most obliging in an architect of Mr. Seddon's large experience to come and speak to them and show them the drawings which formed so important a feature in connection with his paper. Mr. Seddon had insisted on clearness and accuracy in making working drawings. This was a point that could hardly be dwelt upon too much. An immense amount could be learnt by the study and inspection of good drawings.

Mr. R. E. POWNALL, who proposed a vote of thanks to Mr. Seddon, said that the applause he had received would fully show that his kindness had been appreciated. Mr. Pownall observed that the recommendation of adopting a scale of three-sixteenths of an inch to the foot in making sketches for working drawings was to some extent a novelty, and open to the objection that it could not be easily read off the ordinary builder's rule, which did not give that scale. Alluding to some of the drawings showing examples of roof construction, he said he was not close enough to them to see how the thrust was met, but he admired the plucky way in which Mr. Seddon had dealt with spans which were evidently some 30 feet to 35 feet wide. It appeared to him that each layer of bricks had been turned in voussoirs, and not in rings, as was general.

Mr. JAMES SMITH, in seconding the vote, said that clearness and accuracy together represented all that was requisite to constitute a good working drawing. Superfluous lines, which students were fond of introducing, should be scrupulously avoided, as the drawings were simply intended for the guidance of working men, and a lesson was afforded in this respect by Mr. Seddon's drawings, in which all superfluous lines were absent. He could not help feeling gratified that Mr. Seddon had at last condescended to make use of iron in the church at Hammersmith. He thought it was a misfortune to have used Bath stone on the exterior, when marble was used inside, because the Bath stone would not stand the London atmosphere.

Mr. A. B. PITE said he wished to support most heartily the vote of thanks to Mr. Seddon for his kindness in showing them so many excellent specimens of his practice. If he might say so, it was easy to see from them that Mr. Seddon loved his work, and had devoted himself constantly to one style, and thus in an extended professional career had acquired the facility which so nearly approached perfection. If as students they devoted all their energy to the development of one truthful principle, they would be following Mr. Seddon's example as well as the advice the President had lately given them, and when they got older they also might have an opportunity of showing their juniors examples of good work of their own.

Mr. TURNER asked Mr. Seddon whether the plain barrel vault was not injurious in churches on acoustic principles. He thought he had noticed that Sir Gilbert Scott in his later churches had taken steps to prevent acoustic faults resulting from them in the way of echoes, &c. Mr. Seddon, he believed, had once said that he had never used an iron girder in his life. Did he hold to that now? because the use of girders seemed nowadays almost indispensable. It might be said to be a sort of Nemesis that he should now have had to use iron as a roof truss at Hammersmith. With regard to the use of Ancaster stone in London, it had been used in Lincoln's Inn Buildings pretty generally.

The PRESIDENT then put the vote to the meeting, and it was carried by acclamation.

Mr. SEDDON, in replying, said, in regard to the barrel roof, that he had never met with trouble or heard any complaint with regard to echo. His roofs at Great Yarmouth were only repro-



ductions of what was in general use there before. He thought rather that they were good for purposes of sound, and that they helped to send sound well forward. It was just possible that where a church had this roof that faults existed in other directions. For instance, the building might be too lofty, and then steps might be adopted to break the echo, by ties and king-posts, braces, &c. He had never heard of a case in which the roofs, where the intrusion of ties had been dispensed with, had spread or shown signs of weakness, and this he attributed to the arched ribs being well connected with the rafters and collar, which latter was placed high. Mr. Seddon concluded by observing that Mr. Gough had entered, and he would perhaps give them some remarks.

Mr. H. R. GOUGH had noticed that a gentleman had said he was sorry to hear of the use of Bath stone at St. Paul's Church. He regretted himself that they had had to use it, and as far as possible he would avoid the use of it. St. Paul's was the only church in fact of any importance where he had allowed any Bath stone to be used. The reason why they used marble inside was because they were getting it for nearly the same cost as Portland stone—viz. 8s. 6d. per cube, delivered in London, which included a good deal of moulding in caps and bases. Bath stone would not carry the weight inside, for which a hard stone was required. It had been their wish to use Mansfield stone, but the difference in the cost was over 2,000%, and would have made an actual difference in cost of between 4,000% and 5,000%. He was glad to find that one gentleman present was in favour of introducing the use of iron. At St. Paul's Church the ironwork used was not in sight, but he supposed the time would come when iron would be used in sight. At St. Paul's he thought it had been quite legitimately used, and by it they had avoided the introduction of ties and got rid of the thrust of the roof on the walls, and in addition they had been obliged to study economy in building the church. Ancaster stone no doubt had been used hundreds of times before in London, but brown Ancaster had certainly not been used before for walling in London. It was thin, and laid deep in the quarry; there was none in the London market, and but little in Lincolnshire. The rich brown and yellow tints were much admired, and its effect in the mass was so good that they had made use of it for the internal walling, and, besides, it was a cheap walling stone. Mr. Gough, in conclusion, said he hoped he might some day have the pleasure of showing the members over the church.

The proceedings then terminated.

### PRE-HISTORIC REMAINS.

**A** LECTURE on the neolithic remains found in Switzerland, France, and the Isle of Palmaria was lately delivered by Mr. Marr in Carlisle. The most remarkable found in Switzerland were, he said, the so-called lake dwellings. Lake dwellings were by no means unknown at the present day, there being several tribes of people who inhabit dwellings in sheets of water. They were not confined to neolithic ages. They were found in the bronze age and in the Roman period, some of them having been inhabited as late as the first century A.D. It was not till 1854 that their true significance was discovered. In that year the lakes of Switzerland were unusually low, and the inhabitants, digging out the mud for their gardens, came across wooden piles, deers' horns, and implements, and the remains of lake dwellings. These dwellings were built upon platforms, sometimes on piles and on bundles of brushwood, and were connected with the land by causeways. He illustrated the structure of the lake dwellings by drawing attention to that of the Robenhausen house, situated in a peat bog. The platform was composed of timbers and roughly-hewn boards, which were fastened to each other by means of wooden pegs. On this was a number of huts, about nine yards in length by seven yards in width, and between these huts were pens for cattle or domestic animals. The huts appeared to have been generally of oblong shape, but some of them were of circular shape. Most of these dwellings had been destroyed by fire, and underneath the piles themselves, in the lake deposits, they found relics of lake-dwellers in a mass of sediment mixed up with numerous ashes, showing that lake dwellings had been built and destroyed, and others built on the area of the former ones. It was said that the newer dwellings were situate farther from the shore than were the older ones. This had been suggested as due to the fact that in the bronze age the missiles were of a much more perfect character than in the stone age. The weapons, implements, and domestic animals were of a similar character to those already described as occurring in Denmark. So far they had not come across any people who could be proved to have been acquainted with agriculture; but they had undoubted proof that these lake dwellers were acquainted with several cultivated plants. They found several cereals, two or three varieties of wheat, barley, millet, peas, flax, carraway, apples, pears, plums. Mixed up with these were remains of other plants which then grew wild in Europe—chestnut, walnut, acorn, raspberry, strawberry, &c. Without doubt, it was said, the cultivated plants were not derived from wild plants now growing in the same area, but were derived either from some in Europe or else from some in Central or Western Asia. This bore out the suggestion that the domesti-

cated animals were also brought from the same area. The seeds of the cultivated plants found in the lake dwellings, especially the cereals, were very much smaller in size than the seeds of the cereals and others of the similar plants at the present day, showing that we had improved very much in the means of producing the plants as compared with neolithic men. Calculations had been made of the time that had elapsed since the neolithic age, Morlot putting it at 6,700 years. But the basis of the calculations were not strictly trustworthy; and, as in the case of the palæolithic deposits, they found they could get no clue as to the exact number of years, or even to an approximation to the exact number, since the lake dwellings were inhabited by the neolithic people. In Switzerland the bones of the hare were almost altogether absent from the remains, suggesting the idea that a superstition existed with regard to the animal which prevented it being used as food. In France, however, they had proofs that no such superstition prevailed there. He alluded to the neolithic remains in France, the interments in caves of people of the stone age and the *dolmen tumuli*. In the isle of Palmaria a bone, cut and charred, supposed to have been that of a child, had been found amongst the remains, suggesting that the horrible practice of cannibalism, evidence of which was found nowhere else in the European area, had prevailed at this place. He reminded them that in the Victoria Cave at Settle a bone was discovered which was said to be human, but which turned out to be that of a bear. It was just possible in this case that the bone was not the bone of a child or a human bone, but the bone of a monkey; and it was also just possible that as a matter of fact the practice of cannibalism did not prevail in this area.

### THE EMPLOYERS' LIABILITY ACT.

**I**N the Queen's Bench Division on Monday an important case was heard before Lord Coleridge and Mr. Justice Stephen, which raised an important question as to the liabilities of parties for injuries caused by the negligence of persons in their employ who at the time are working for them on piecework. The Gas-Light and Coke Company were having some work done at a place in Essex which required piles to be driven, and they had contracted with a man in their employ named Pearson to do the pile-driving as piecework or jobwork at certain rates or prices. Pearson engaged the plaintiff Cooper to work at the pile-driving, and was actually working with him and others, Pearson being above, sending down the instrument called the "monkey," by which the piles are driven, and the plaintiff below, putting the piles in position; it being his duty to cry out "All right" just before the "monkey" was let fall, and Pearson's duty being on that signal to let it fall. Somehow or other Pearson let the "monkey" fall (as he said, after hearing the signal; and as the plaintiff said, without it), and it fell on the plaintiff's thumb and crushed it. The question as to negligence, at the trial before the County Court judge, was whether or not the plaintiff had given the signal; and the jury found he had not. Then arose the question as to the liability of the company for the consequences of the accident; and on their part it was contended that Pearson was an independent contractor, and that therefore he, and not the company, was liable; while on the other side it was contended that Pearson was in their employ, and was only paid for piecework instead of by wages, and that therefore the company were liable. The County Court judge was of the former opinion, and therefore directed a nonsuit. The question was now raised whether that view could be sustained.

Lord Coleridge asked whether, if the company's engineer who engaged Pearson saw that he was doing the pile-driving wrongly, he could interfere; to which the company's counsel answered that he could not.

It was urged that Pearson was paid by the company, and that he paid the plaintiff; but

Lord Coleridge said that was always so when "gangers" were employed.

It was urged strenuously on the part of the company that pile-driving was work quite distinct from their own, and which, therefore, they contracted for; and it was a matter of great importance whether they should be liable for the negligence of their contractors.

Mr. Justice Stephen said no doubt it was a question of great importance, and there were dangers and difficulties both ways. On the one hand, it might seem hard that a company should be liable for the neglect of contractors; on the other hand, it would be easy for employers always to get rid of their liability by having work done by piecework.

Lord Coleridge added that here Pearson had been in the company's employ for years, and paid by them, and it could hardly be said that the company's engineer could not control him if he was pile-driving in the wrong way.

Mr. Justice Stephen said it appeared to him that it was a question, on the evidence, for the jury, and that there were considerations and facts tending both ways; and

Lord Coleridge observed that the company desired to retain control, and also relieve themselves from responsibility, which raised the difficulty.



The Court, after fully hearing the counsel for the company, came to the conclusion that the judge was right at first in leaving the case to the jury, and wrong in afterwards directing a nonsuit to be entered.

Lord Coleridge said that the question was not whether the verdict was right, but whether there was any evidence for the jury; and they thought that there was, and that the question was for the jury to decide. The question was whether the person whose negligence caused the accident was in the employ of the company and intrusted with the superintendence of the work, and the jury found that Pearson was in that position. The Act of Parliament, which was sometimes said to have imposed so heavy a liability upon employers, merely extended the common liability which already existed as to others—to persons in their employ—under certain circumstances. The question, no doubt, was important, and employers could not be entitled to evade their liability merely by paying their workmen in a particular way. The law must not be allowed to be evaded, and the employers who retained control over the work must, under such circumstances, remain liable. There was ample evidence here that the company had retained a control over Pearson, who was described only as a "foreman" or a "leading hand." He was merely employed to do certain work, which he was to do as piece-work instead of day-work. The principle was that if control was retained over a man he was a servant, and not a contractor. There was such control here, and therefore the nonsuit must be set aside, and the verdict entered for the plaintiff for 75*l*.

Mr. Justice Stephen concurred, observing that the Act was important, and should be construed as clearly as possible, and the question was important whether the employers could escape liability in this way. If the work to be done was really put out of their hands into the hands of an independent contractor as a builder, then the employer did escape liability. But it was not so where the employer only paid his own men by piece-work. If control was retained over the workmen, then the liability remained. It was often supposed that a contractor could not be a servant or a workman, but that was not so, and a person doing work under a contract might still be a servant, so that the employer would be liable.

The judgment, therefore, was given for the plaintiff.

In the Glasgow Sheriff Court a curious case has been heard. The pursuer or plaintiff, Charles Duffy, mason, was working at the Royalty Buildings, Sauchiehall Street, Glasgow, and in the course of his work on November 9, 1880, he alleged he was instructed by the master of works employed by the defenders, the Central Halls Company (Limited), to fill up some holes in the well of the hoist in the buildings, and in order to do so to go up by the cage, taking with him what materials he might require for the job. Pursuer did as he was instructed; but while at work at a height of 52 feet the cage of the hoist gave way, and pursuer was precipitated to the bottom, receiving such severe injuries that he has not since been, and will not likely again be, able to do anything for his own support or that of his wife and family. He further alleged that the accident was caused by one of the wheels of the hoist being defective. The defenders denied pursuer's statements, and averred that the hoist had not at the time of the accident been taken over as finished from the engineer who had erected it. They further pleaded contributory negligence on the part of the pursuer. The Sheriff-Substitute on July 11 last gave judgment against the defenders for 300*l*. and expenses, in respect that the hoist and its machinery were proved to be defective, and the defenders had for their own purposes chosen to take the use of it with its risks, treating it as if it were theirs, whether it had been formally taken over from the engineers or not. He therefore held that whatever might be responsibility as between the defenders and the maker of the hoist, they were liable to third parties for its defects. The case was appealed to Mr. Sheriff Clark, who has issued his interlocutor adhering to his substitute's decision, and giving additional expenses to the pursuer.

### ITALIAN ART EXHIBITION, GLASGOW.

A LIST of the objects to be lent by her Majesty to the forthcoming exhibition has now been received from the Lord Chamberlain's department. Among the loans will be the famous Cellini shield, a magnificent sword and a dagger, two statuary groups in bronze, and two bronze plaques illustrative of Summer and Winter. Sir Robert Hay, of Haystoun and King's Meadows, has also consented to lend two pieces of Italian armour, one of which—a shield—is by the best authorities considered to be by the same artist as the so-called Cellini shield; and the other—a helmet with oreilletes—is by the famous Milanese armourer, Negrolì, and forms a portion of one of the most exquisite suits known. A series of remarkably beautiful shields, swords, and other arms is also to be lent by Mr. David Currie, of London, and there will also be shown reproductions of a few magnificent dress shields from the historical armoury of Prince Carl of Prussia.

### THE VENTILATION OF PUBLIC BUILDINGS.

A MEETING of the Architectural Section of the Philosophical Society of Glasgow was held on Monday. Mr. James Sellars, jun., presided. Mr. John Hay read a paper on "Ventilation considered in Relation to the Opposite Seasons of the Year." Mr. Hay, in the course of his remarks, observed that although ventilation was now a popular subject of consideration, it was nevertheless treated with more or less dogmatic assertion rather than patient and attentive study. In summer, he pointed out, the main question, especially in public buildings, was not so much the purity or impurity of the atmosphere, but rather that in proportion to the increase of temperature the air should be moved to obtain comfort. This motion, he said, could be obtained by difference of gravity, and where this could not be obtained or created by artificial heat, mechanical power should be resorted to. In winter ventilation was most easily effected by utilising the heat apparatus for the admission of fresh air, this arrangement being of still more value in mansions than in public buildings. At the conclusion of Mr. Hay's remarks a discussion took place.

### PROPOSED ART GALLERY IN GLASGOW.

A MEETING has been held in Glasgow, on the invitation of the Hon. John Ure, Lord Provost, to consider a project for the purchase of a site and the erection thereon of an Art Gallery, Museum, School of Art, and Public Library.

The Lord Provost said: Gentlemen, I have taken the liberty of asking you to come here to-day, believing that you all feel as much interest as I do in the different objects that are put before you in the circular I had the pleasure of sending to you—that is, as regards an art gallery, a museum, a public library, and a school of art. For myself, I have long felt that Glasgow was not in the position it ought to be as regards these institutions, and that, contrasted with very many provincial towns, we are very far behind. No one can travel in England and come back without being impressed with the fact that there is a different class of people there altogether from what we have in our Scotch towns. And yet we should not altogether condemn our Scotch towns when we think of our near neighbour Paisley, that has so many of these institutions. Quite recently they have got a museum and public library, and if not a school of art, they have got at least an observatory that is extremely creditable to them. Then they have also had presented to them that which we are to have by a public rate—namely, municipal buildings, the gift of the Messrs. Clark. I have often heard it said that if proper places were provided in the city we should soon almost be deluged with works of art and fine pictures. I cannot tell whether it is that, not having asked the citizens for such, we have not had them in the past, or whether it is that they trust to the general public doing it by way of assessment; but certainly it is the case that hitherto we have not had them. As regards the Corporation Galleries, we have three rooms in them that are very suitable for hanging pictures, and other accommodation for conversaciones and such like; yet these rooms want what I consider to be indispensable in connection with any picture gallery—a fireproof construction. I have only to bring to your recollection the report that was given to us by Mr. Robinson a short time ago as regards the art treasures we have in these rooms for you to see the force of the remark I have made as regards fireproof construction. We did not think it needful to ask him to look at the more modern pictures that are in our possession. We know ourselves pretty well the value of these. I believe they may be computed to be a very great number of thousands of pounds. I have only to remind you that the last gift we got of a very valuable picture was from the late Mr. John Mc Gavin. Indeed, I believe if we had had a proper building for more of that gentleman's pictures we would have got them; but even the one he bequeathed to us cost himself upwards of 2,000*l*.; and I have no doubt that, but for the want of accommodation, other gentlemen would have given us valuable pictures. Besides these modern pictures there are those valuable presentation portraits, which are in themselves of great value. I do not think it is right that all these treasures should be housed in a building where there are ordinary dwelling-houses and shops in connection with it, and I have often felt very deeply that those in authority undertake a great responsibility in having those valuable treasures housed as they are at present. Then, as regards our museum, you all know how we stand in that matter. We have only that small affair in Kelvin Grove Park, which may be very good as a branch of a great museum in the centre of the city, but certainly cannot be regarded as such a building as Glasgow ought to be contented with for such a purpose. My view of it would be that it should be utilised as a branch from a central museum, and that in the east end of the city and on the south side we should have at least equal accommodation to what we have in the West End Park. Then, as regards our Public Library, you who have visited the building in East Ingram Street which is used for that purpose, in near contiguity to where we are now met, know how inefficiently the library is housed. Surrounded as it is by other buildings, and works of various kinds



going on in the neighbourhood, no one can tell the hour when a fire may occur and that valuable collection of 30,000 or 40,000 volumes be consumed. I feel also the responsibility of having that institution placed as it is at present, and hope that others will take the view that I do—that the library ought to be in a very different position. Then there is another matter, and it is the last I shall call your attention to—I mean the School of Art. You know the position in which it is in the matter of being very inefficiently housed. One of the directors of the School of Art has put into my hands extracts from the last report of the inspector who visited it, and, if you please, I will take the liberty of reading some of them. They are to this effect: "The measurements which I have taken of some of the rooms, and of the windows which light them, prove that they are ill adapted for the purposes of a school of art. In the elementary classrooms the lights are so placed as to throw a confused or uncertain half-tone, instead of positive light and shade, upon the casts. It is not too much to say that, with the aggravation of the grey dull atmosphere prevailing here for half the year, the students labour under a positive disadvantage in executing works for national competition. The room for painting still-life and other groups is the worst of the series. It measures 16 feet by 23 feet, with light far overhead, besides a side light. In this area the two bookcases, which are continually being overhauled by students, further cramp the room, and are a source of interruption. The best room is that containing the antique figures, at first impressing one by its ample size, but the light, being high up, obviously gives undefined shadows on the casts, and moreover beguiles the student into the belief that his work is more complete than it would or does appear in the stronger glare of the examination-room. The result, therefore, is altogether unsatisfactory to masters and students. The modelling-room and lecture-room are terribly cold in winter, and the reverse in summer. Owing to the heat the lectures have to be broken off in April each year. In winter they are afraid of introducing proper heating apparatus, inasmuch as, being entirely constructed in wood, it would burn like tinder. For these and other causes it becomes quite necessary to replace this makeshift abode by more efficient galleries at the earliest opportunity." I have heard from the teachers, and I have heard it from the students, that they are working under the greatest disadvantage at the present time, and the wonder to me is rather that they should have taken the position that they have done. There was a time when Glasgow stood high as a seat of the cotton manufacture. I believe in a large measure that has fled from our district altogether. I cannot tell whether it is that the necessary art education to keep ourselves in the front of the times in regard to the more ornamental fabrics has not been cultivated here, and that therefore the trade has left the district, but it is a fact all the same that the cotton manufacture is more largely developed in some of the small provincial towns in England than we have it in this large city of Glasgow. I am told also that as regards our iron manufacture the ornamental departments of it are leaving our city. Whether that may be attributable to a want here of that artistic skill which is to be found elsewhere I cannot tell, but the great district of Middlesborough is attracting some kinds of manufacture in iron which used largely to prevail in Glasgow. The want of the necessary artistic skill is said to be the probable cause of this decline. Well, gentlemen, this matter has been precipitated upon me at the present time by the circumstance which was brought to my knowledge, that a site which I think is extremely suitable can be had for a comparatively small outlay of money. The site that I propose is the vacant space of ground in Sauchiehall Street. It is bounded by Dalhousie Street on the east, Scott Street upon the west, Sauchiehall Street upon the south, and Renfrew Street upon the north. The ground consists of 9,000 odd square yards, and I have asked Mr. Carrick to prepare a plan showing the way in which the ground can best be taken advantage of. The proposal would be to allow the present buildings to remain until the vacant space was built upon, and when the new buildings are in working order the articles that are housed in the present galleries can be transferred to the new buildings.

Mr. Carrick explained the sketch-plan that had been made. It was proposed to utilise the ground on the west side of Dalhousie Street for the museum, fine art school, and fine art gallery, leaving the present buildings to the east as they are at present. After the transference of the art treasures at present in the Corporation Galleries the present building would form a central reference library. The street which at present existed between the galleries and the vacant ground would be retained for foot passengers. The whole erection would form one mass of building, having a frontage to Sauchiehall Street of 560 feet, and by keeping Dalhousie Street open in the manner shown in the plan they would be enabled to solve the difficulty of dealing with the unequal level of the ground.

The Lord Provost stated that a letter had been received from Sir Philip Cunliffe Owen regarding the scheme, and expressing his unqualified approval of it. His Lordship then said the project before them was the purchase of the site, and to give it to the city. If they did that he thought he could almost undertake that the buildings shown on the plan would be erected thereon. No doubt he would require to go back to his fellow-citizens, and he believed

he would get in smaller sums what was needed to complete the proposal.

Mr. George Jackson, as chairman of the Galleries Committee, gave some information as to what had been done in other places in reference to the formation of art galleries. In Liverpool, Mr. Walker had gifted 40,000*l.* for the erection of an art gallery; in Birmingham, recently 10,000*l.* was asked in subscriptions, and the citizens gave them 16,000*l.*; in Salford, one gentleman gave 10,000*l.* for an art gallery; in Derby, 50,000*l.* had been received by public subscription for a school of art, public library, and art gallery; the Manchester School of Art had been erected at a cost of 50,000*l.*, obtained by subscription; in Chesterfield subscriptions and donations to the amount of 25,000*l.* had been received for a museum, &c.; in Aberdeen a museum and art gallery had been furnished by public subscription at a cost of 10,000*l.*; and in Dundee the Albert Institute and Museum had been erected at a cost of 30,000*l.* He suggested that the Corporation, Hutcheson's Hospital, the Merchants' House, the Trades' House, and other public bodies who had given subscriptions for the erection of the University, might be induced to do the same for the proposed scheme.

A committee was afterwards appointed, consisting of the Lord Provost, the Lord Dean of Guild, Mr. James White, of Overtoun; Mr. James King, of Levernholm; Mr. J. B. Fleming, and Mr. J. Wyllie Guild, with power to add to their number, for the purpose of obtaining the support of prominent citizens to the scheme.

## MUNICIPAL REGULATIONS IN BIRMINGHAM.

THE Birmingham Town Council have been engaged during the week in considering the draft of the new Birmingham Corporation Bill for consolidating and amending the various Acts and Parliamentary Orders affecting the powers of the Corporation. These powers relate to sanitary matters, the regulation and control of the parks, municipal buildings, free libraries, and other property of the Corporation, the bylaws affecting porters and drovers, hackney carriages, and marine store dealers, the police regulations, the sale of coal, the duties of the fire brigade and the prevention of fires, the employment of children in factories and workshops, the conduct of the gas and water departments, the Closed Burial Grounds Act, and the finances of the borough, together with a number of miscellaneous regulations and provisions.

The third part relates to streets and buildings, and reproduces existing powers. It provides that trees which overhang roads or streets must be lopped by owner, or Corporation may do it in default. The re-erecting of any building of which the front has been pulled down to the street level shall be regarded as a new building. New buildings may be required to be set back seven yards from the centre of a street, under a penalty of 50*l.*; owners to be compensated for land given up, or make provision to compel "ample and convenient means of ingress and egress" to and from any building used as "an hotel, refreshment-room, church, chapel, school, or theatre, or other place of public amusement or entertainment, or for holding a large number of persons for any purpose." Penalty, 50*l.* Coal-shoots in or under footways are not to be constructed without leave of the Corporation. The Corporation may make bylaws as to all matters relating to the building of houses, &c.; drainage, ventilation, closets, &c.; but such bylaws to affect only new buildings. The Corporation may close buildings unfit for human habitation, and may prohibit the use of sleeping-rooms extending over ashpits, middens, &c. A new code is provided, rendering the terms of executing and paying for private street works, drains, footpaths, &c., easier to owners.

It is proposed to give power to maintain the Council House, Town Hall, and other municipal buildings; to secure the use of the Town Hall, as at present, for the musical festivals; to give power to the Corporation to buy the Town Hall organ; to provide that "any act or thing" required by Act of Parliament to be done in the Town Hall may be done in the Council House; and to place the letting of the Town Hall wholly in the hands of the Corporation or of its committee. Provision is made for the erection of Assize Courts, "either within or without the borough," and either for the borough alone or for any assize district which may include it. The money for the purchase of land and provision of building to be borrowed with the sanction of the Local Government Board.

The Bill also provides for the erection of a school of art on the site given by Mr. Colmore, and with the donations of 10,000*l.* each given by the Messrs. Tangye and an anonymous donor. It provides for the transfer of the School of Art and all its property and funds to the Corporation. It provides for the management of the school and of the Public Museum and Gallery of Art by a committee, in the first instance partly nominated by the Corporation and partly by the existing School of Art committee, but afterwards by the Corporation alone. The cost of maintenance, in excess of students' fees, Government grants, and endowments, is to be defrayed from the free libraries rate; and for this purpose, and the general execution of the Libraries Acts, the limit of the rate to the sum of one penny in the pound to be removed.



HOSPITAL CONSTRUCTION.

AS a large number of plans for hospitals are from time to time submitted for the approval of the Local Government Board by Boards of Guardians, it was considered desirable that the experience of foreign countries as regards the arrangement and construction of such buildings should be utilised. With this object the architect of the Local Government Board, Mr. P. G. Smith, was instructed to visit certain hospitals at Heidelberg, Strasburg, Paris, and St. Denis, which are stated to present good examples of various types of improved hospital construction. Mr. Smith's report of the short inquiry which he was able to make on the subject, together with some notes by our inspector, Dr. Mouat, who accompanied him, is printed in the appendix to the report of the Local Government Board. Hereafter we may be able to print it. The following are the conclusions arrived at by Mr. Smith:—

The general result of my observations at the several hospitals visited leads me to believe that much advantage is to be gained from an insight into the most recent hospital arrangements adopted in other countries. My inspection of the hospitals referred to in the foregoing remarks was necessarily brief, and therefore did not allow me to form as complete an opinion upon some points as a more minute examination of them would have permitted; nevertheless there are several particulars wherefrom I think we may usefully take hints, even if we may not find it always expedient or convenient to wholly adopt similar arrangements in this country.

1. One of the most important points I have observed is the large extent of site compared with the number of patients occupying the buildings erected thereon. The following table shows the particulars in this respect of each of the hospitals named in the first column:—

Name of Hospital.	Number of Patients.	Approximate Area of Site.	Square Feet of Site per Patient.
		Acres.	
Heidelberg . . . . .	382	10	1,140
Strasburg . . . . .	122	1½	530
Bichât (Paris) . . . . .	180	2 nearly	480
St. Denis (Paris) . . . . .	166	6	1,570
Bourges (Military—not visited) . . . . .	270	10	1,760

It is right to observe that the ten acres at Heidelberg includes space for the medical and surgical schools; while at Strasburg, where the hospital is a portion only of one large institution and stands on a comparatively small site, the administration and the kitchen and laundry offices, &c., are elsewhere beyond the actual site. The Hôpital Bichât, again, is only partially a new building. A comparison of some modern hospitals in England is of interest as showing that the patients are much more crowded on a given area in each instance:—

Name of Hospital.	Number of Patients.	Area of Site.	Square Feet of Site per Patient.
		About	
Marylebone Parish (Notting Hill) . . . . .	744	3¼ acres	188
Holborn Union (Highgate) . . . . .	617	3 "	220
Central London Sick Asylum at Highgate . . . . .	523	3½ "	300
St. George's Union (Fulham) . . . . .	840	2½ "	140
Croydon Union (now erecting) . . . . .	636	7 "	535
Salford Union . . . . .	874	54 "	296
Manchester Township—Crumpsall . . . . .	1,400	9 "	285

2. The tendency in the modern hospitals described in this report is to subdivide each institution itself into a number of detached ward-blocks containing comparatively a small number of patients in each. This is specially noticeable at Heidelberg and St. Denis, where the separation so far as atmosphere is concerned is absolute; while at Strasburg and at the Hôpital Bichât the separation is not nearly as complete as would seem desirable. As regards the Heidelberg Hospital it has been in active operation through five entire winters without any unsatisfactory results arising from the separation referred to. At the recently-built Frederichshain Hospital at Berlin which I have not yet seen, I am given to understand that the ward-blocks are wholly detached, there being no covered ways between them at all.

3. The several blocks of building occupied by patients are spread about the site so as to allow ample space between them to insure perfectly free circulation of air and access of light to all parts. In connection with this particular it is to be observed that the separate blocks are invariably of much smaller size than is commonly the case in England, and the number of patients in them is proportionately small. Thus, with the exception of the older portions of the hospital at Heidelberg (which were commenced twelve years ago), no single block contains more than two

storeys of sick wards nor more than fifty beds, while the one-storey blocks for severe cases have as few as fourteen and twenty beds in them.

4. It is customary in England to arrange the several blocks of a building in such a way that they shall not be directly connected together at a right angle, as such an arrangement is held to interfere with free circulation of air about the building. Not only is this excellent custom fully recognised in most of the hospitals that form the subject of this report, but in each of them, in one form or another, it has been further sought to get rid of the enclosed angle that is usually formed by the vertical sides of a building with the ground on which it stands. Thus it has been regarded as an essential in each hospital (except the little puerperal wards at Lariboisière) to raise the ward-blocks from the ground and to so arrange them on arches, piers, columns, or otherwise, that there remains an open clear space beneath them, 6 or 8 feet high, through which the external air can have free access. This is held, and justly so I think, to be of much importance to prevent stagnation of air about the wards and beneath the windows and ventilators.

5. In all the new hospitals described in this report arrangements have been made for getting the patients, or some of them, into the external air wherever possible. Thus the open space beneath the ward-blocks is sometimes (as in the hospital at St. Denis and the Hôpital Bichât) adapted to this purpose, the covered ways and arcades are so used at Heidelberg; and at all the hospitals, terraces or verandahs, opening immediately out of the wards, are provided to a greater or less extent, on to which the patients, in beds, wheeled chairs, or otherwise, may occasionally be removed, with, it is said, the most satisfactory results.

6. In all the hospitals that I have visited the means of warming the wards and buildings is far more powerful than is usually deemed sufficient in England, and thus the wards are able to have the air in them changed much more completely and frequently than would otherwise be the case, thereby improving the aëration of the wards to a most advantageous extent. Hot air from calorifères is very generally used for this purpose, and though it may be questionable whether this is the most satisfactory way of providing the requisite warmth, the expediency of the increased warming power is indisputable.

WARMING BUILDINGS BY STEAM.

AT the meeting of the Institution of Civil Engineers held on Tuesday last a paper was read on "American Practice in Warming Buildings by Steam." It was by the late Mr. Robert Briggs, of Philadelphia, U.S.

Originating about 1840 with the late Mr. Joseph Nason, the application of steam to the warming of buildings in the United States extended very rapidly, the apparatus being constructed of small and comparatively inexpensive wrought-iron welded tubes, which combined a large extent of heating surface with great strength, and with facility for transmitting heat in any direction from a central source. For securing durable steam-tight joints the tube-ends were made with tapering screw-threads, and a paste of white and red lead was applied in screwing up. The couplings or sockets were made of cast-iron, and were tapped taper to fit the tube ends, excepting only the straight couplings for connecting tubes in the same straight line, which were of wrought-iron and tapped parallel.

The steam was supplied either by boilers of the horizontal tubular or Seguin type, or else by the Badcock & Wilcox water-tube circulating-boiler with horizontal steam-drum overhead; either kind was practically safe from disastrous explosion. The steam circulating through the warming apparatus was either live steam direct from the boiler, or exhaust steam; the two were frequently used in combination, the latter being rarely employed alone. When using live steam, the circulation was either closed throughout from communication with the atmosphere, or was open to it at certain places. In the former case the distribution of the heat was effected either by separate supply and return mains, or else by a single main for both supply and return, either with or without a longitudinal partition inside it for separating the outward current of steam-supply from the return current of condensed water. In open circulation a supply-main conveyed the steam to the radiating surfaces; whence a return-main, suitably trapped for preserving the steam-pressure, conducted the condensed water either into an open tank for feeding the boiler, or into a drain. These two systems were most generally combined in any extensive warming apparatus. The steam stop-valves, known as "globe" valves, were disk or poppet-valves, worked by a screwed spindle; this construction was introduced by the author in 1849, and was immediately followed by all makers.

In respect to the radiating surfaces for diffusing the heat, three distinct classes of apparatus were in use. Firstly, apparatus for warming rooms by direct radiation from surfaces exposed in the rooms themselves. Secondly, apparatus for indirect warming by currents of air; the heated surfaces were placed in a chamber, through which a supply of air passed on its way into the room. In neither of these two methods was the warming accompanied by



any systematic ventilation. Thirdly, apparatus for both warming and ventilating, arranged so that the warming should take effect upon the whole of the air admitted for ventilation. The temperature comfortable to Americans in cold weather was about 70° Fahrenheit on the Atlantic coast, rising to 80° or 85° for inland localities. In warming by direct radiation the practice for many years was to arrange the steam-pipes in lines or groups along the bottom of the outside walls or under the windows. But the most recent practice, for rooms in mills, was to suspend the direct radiating pipes in rows overhead. Although the heat would here apparently be expended in the top of the room, yet very satisfactory results were thereby obtained, both in equability of warming and in efficiency of radiating surface.

The radiators for warming by direct radiation consisted usually of so-called "coils," composed of  $\frac{3}{4}$ -inch and 1-inch steam-pipes, arranged in parallel lines and coupled to branch tees or heads. Sometimes short lengths of pipes were coupled by return-bends, doubling backwards and forwards in several replications one above another, and forming "return-bend coils"; when several of these sections were connected by branch-tees into a compact mass of tubing, the whole was known as a "box-coil." In vertical-pipe coils a number of short upright 1-inch tubes were screwed into a hollow cast-iron base or box, and were either connected together in pairs by return-bends at the top, or else each tube stood singly with its top closed, and had a hoop-iron partition extending up inside it to nearly the top. For getting rid of the air a trap was provided, having an outlet controlled by metallic rods; as soon as all the air had escaped and the rods became heated by the unmixed steam, their expansion closed the outlet. For indirect radiating surfaces, the box-coils were the forms most used. The chambers containing them were made either of brickwork, or often of galvanised sheet-iron; the coils were suspended freely within the chambers, which were themselves attached to the walls containing the air inlet flues.

Where systematic ventilation was carried out in conjunction with warming, these indirect radiators and chambers were employed. The warming could be most effectually controlled by so arranging the chamber containing the radiator, that the whole or any part of the fresh air entering could be made either to pass through the radiator and be warmed, or to "by-pass" it and escape heating. The warmed and unwarmed currents were then mingled in a flue, whence a supply of fresh air suitably tempered flowed into the room, the occupant of which could thus regulate the temperature as comfort might require, while obtaining a constant supply of a definite quantity of fresh air.

Where a blowing-fan was employed for impelling a current of air through a building, a large auxiliary coil, placed at the entrance of the flue leading from the fan into the building would be an improvement for extensive apparatus, and would save about 10 per cent. of surface, while supplying a constant volume of fresh air raised to any temperature between 50° and 120°.

An example of warming on an extensive scale was afforded by a large office building in New York, containing nearly 2,000,000 cubic feet; and by the State Lunatic Asylum at Indianapolis, containing more than 2,500,000 cubic feet. Both of these buildings were heated by steam. But such instances failed to convey any idea of the very general prevalence of warming by steam in the commercial cities of America. There appeared indeed no limit to the future extension of systematic steam-supply for warming and for motive power.

## DRAINAGE AND VENTILATION OF HOUSES.

At a meeting of the Society of Medical Officers of Health held at 1 Adam Street, Adelphi, on November 17, the President, Dr. J. W. Tripe, in the chair, a paper was read by Mr. Rogers Field, M. Inst. C.E., on "Certain less recognised but highly important points in the Drainage and Ventilation of Houses," of which the following is an abstract:—

Three sanitary principles govern house drainage. These are—  
1. All refuse matter must be completely and rapidly removed from the house. 2. There must never be any passage of air from the drains or waste-pipes into the house. 3. There must be no connection between the drains and the domestic water supply. These, although so simple, are very frequently neglected; the first goes absolutely to the root of sanitation, for, were it strictly complied with, there would be no leaky drains, no polluted subsoil, and no production of foul gases in the drains from decomposing organic matter. There cannot be a greater mistake than to assume, as is commonly done in investigating drainage, that if water runs away with freedom, this is all that is required. Numerous cases are on record where the sewage from houses has apparently run away freely for years, but where the greater portion of it has really been leaking out of the drains into the ground under or close to the house. In illustration of this point the author quoted two cases in his own practice, one in which the connection with the sewer was actually found to be blocked with shavings which had been left in when the house was built, three years before; the other that of a school in which the drainage from the

lavatories had leaked through disused drains under the floor of a large portion of the building, and where, although there was a mass of filth in some places seven feet deep, no leakage had been suspected. If the drains are exposed and found clean and jointed with cement, this is not sufficient; the tops of the joints may be good and the bottoms bad. The only safe method is to actually test the drains by plugging them at the lower end and filling them with water; very few house-drains indeed stand this test. Even if the drains are outside the house, it is a mistake to assume that it is unimportant whether they are sound or not; not only may sewage leak out of faulty joints and percolate under the house, but foul air may be drawn into the house.

It is important to realise how small an amount of deposit will create mischief by decomposing and generating foul gases; a mere irregularity of the joints, even when the drain has a good fall, is sufficient to cause this. There is no better test of the condition of the drains than the amount of smell emitted from a ventilating opening; for if drains be properly laid and in thorough working order, practically no smell should exist. Examples were given. Faulty forms of traps and water-closet apparatus were strongly condemned by the author, and diagrams descriptive of good and bad closets were exhibited.

The principle that there should never be any passage of air from the drains or waste-pipes into the house was then considered; and the means of isolating the house drains from the public sewer, the necessity of keeping the drains outside the house, their ventilation as well as that of the soil-pipes, the position of the water-closets, and the disconnection of the sanitary fittings inside the house from the drains were referred to. It was insisted that the danger should be guarded against of trusting too much to those parts of the drainage of a house which are visible as an index of the condition of other and important parts which are concealed, and an instance was mentioned of a house the drainage of which had been recently reconstructed and where all the sanitary arrangements appeared at first sight to be perfect, but where a subsequent examination of the drains, which were under the house, showed that the joints were in many places defective, and at one point the pipes were not jointed at all, but a space left large enough to put a hand in, though it was stated that special care had been taken to make the drains water-tight. Old drains which had no outlet connected with gullies were found beneath the passages and rooms. The housemaid nearly died of typhoid fever, and beneath the room she occupied was found an old drain with a large amount of foul deposit. A long list of other defects was described, leading to the conclusion that the drainage, instead of being very good, was really so radically defective throughout, that it was necessary to reconstruct the whole of it.

Another instance was given in which a lady and her cook were attacked with erysipelas and blood-poisoning shortly after occupying a house. Various alterations were made in the drainage during the absence of the family; but on their return the lady was again attacked with erysipelas, and shortly after other members of the household. Again alterations were made, and again the lady was attacked with erysipelas and the housemaid with typhoid fever. An examination of the house by the author showed that an old stoneware drain in the scullery, into which the sink formerly discharged before it was disconnected, had not been removed, and though stopped with cement the stopping was imperfect, thus allowing the air of the drain to enter the house.

The author next considered the various ways in which foul air from faulty drainage inside the house passes to different parts, and pointed out the opportunities which were given for the passage of air from one part of a house to another depending chiefly upon windows and fires; the latter of course mainly acting by drawing air through passages, staircases, and doors. But other channels must also be borne in mind, and an interesting account was given of the passage of foul air along bell-wire tubes, the proximity of the bell-pull to the fireplace giving an increased opportunity for air to be drawn from a distance to this part of the room. Channels for gas-pipes and for hot-water pipes also not uncommonly give facility for the admission of foul air. In connection with this part of the subject a remarkable instance was given of a particular bed in a school, the occupants of which were constantly the subjects of slight attacks of pneumonia, with tendency to typhoid. In this case the foul air was conducted from a lavatory where there was defective drainage, up a staircase, and, impinging on the ceiling of the dormitory, was reflected on to the bed where the sickness occurred.

An interesting account was given of the cause of the Duchess of Connaught's recent illness. Defective drainage was found in the basement of the house, and after numerous experiments the means by which the foul air entered the Duchess's bedroom were discovered. These showed that it was only when occupying certain positions in the room that she would be exposed to the influence of the foul air, while in bed she would escape. As a matter of fact, in twenty-four hours after sitting on a sofa in one of these exposed positions, her Royal Highness's symptoms fully developed themselves. These two cases were illustrated by diagrams. The necessity of a thorough disconnection between the drains and the domestic water supply was then dwelt upon,



and the mistakes most commonly made in this particular pointed out.

In the discussion which followed, the president, Dr. Buchanan, Dr. de Chaumont, Dr. Corfield, Mr. E. C. Robins, Dr. Bate, Mr. Jacob, Dr. Rogers, Dr. Poore, and Mr. Shirley Murphy took part.

### THE EDINBURGH ARCHITECTURAL EXHIBITION.

THE following are the regulations for sending drawings to the Edinburgh Exhibition:—1. Works sent in for exhibition from Edinburgh to be delivered at the exhibition rooms, Royal Academy National Galleries, Mound, *unpacked* and ready for hanging. Those from a distance will be unpacked and repacked at the Galleries free of charge; but all the expenses of carriage must be defrayed by the exhibitors. All works must be removed from the Galleries before January 6, 1883. 2. All works to have (1) the title of the subject; (2) the name of the architect or artist; and (3) the name of the exhibitor, inscribed upon them, so as to be easily read when hung up. 3. All works to be accompanied by a letter, directed to the acting secretary (Mr. Alfred Bryson, Royal Academy, National Galleries, Mound, Edinburgh), containing the full name and address of the exhibitor and a list of the works sent by him. 4. Works may be either framed and glazed or upon stretchers, or in loose sheets in portfolio, but not rolled. Every care will be taken of the works sent for exhibition, but the Association will not be responsible for injury or loss. 5. All works sent for exhibition are submitted to the judgment of the Council, who may reject such as they consider unsuitable.



#### Waltham Abbey.

SIR,—Having known this church for some thirty years, I am glad to be reminded by Mr. Reeve's recent notice in your columns of his very careful and minute illustrations of its more important features which you published in January and February 1876. Work of that kind—so well done—is always of very high value as regards the relative ages of different parts of a building, apart from the correctness of the reasoning founded on it. But the question of special interest in Waltham Abbey is as to the *actual* date of its oldest part, and at the threshold of this question the evidence of Mr. Reeve breaks off.

Mr. Burges, though willing to admit that it is "within the range of possibility that Harold might have built it," and that "there is no distinct proof to the contrary," fairly owns that "it can scarcely be denied that the architecture more resembles the work of Henry I. than that of the very few remains of buildings contemporary with Harold." I think most architects will consider this guarded language the very utmost that could be said on the side of those who think this to be Harold's church; but when Mr. Reeve assumes this as a fact, I should like to ask him how—even if we grant the earlier age of the western bays—he can carry them back some two generations, or sixty years, at a single bound?

In order to do that we must assume some such conditions as the following:—Harold, having begun his work in 1056, finishes a complete church of these massive proportions by 1059 or 1060, not less than three nor more than five years. In that time the design probably had to be prepared and the financial arrangements made. The workmen had to be brought from Normandy, and much of the material also. But all the solid materials had to be fetched from long distances—quarried, felled, or mined—carried over such rudimentary roads or ill-regulated water-ways as then existed, and run up into such a building as we now see in part, on such foundations as would have to be made.

Though the design was obtained from Normandy, and though Harold, in order to be struck with the beauty of the Norman buildings must have seen some which had been in progress for years—immediate forerunners of a numerous class—not one of these can now be traced as having existed at or about this period in France or England, but such buildings as are known to be contemporary are in an earlier manner. Moreover, the workmanship, particularly as to the jointing of this early work at Waltham, is better than that which is close to it, of more sumptuous design, and some half-century later in execution. I confess that, compared with such improbabilities as these, the least probable theory I have heard from the opposite side on this question seems fairly reasonable.

Looking at it from that side which it is admitted that the architectural features indicate, it seems reasonable to suppose that Harold did build such a church as his foundation of secular canons required, and as could be built in the time stated—that this, being designed in the Norman manner, was a wonder to the

English, though the story of his visit to Normandy can add but little weight to this theory. The canons were, as we know, ruined by the Conquest, and their church, having suffered such changes from weather, and perhaps from faulty construction, as were common enough, was found by their successors, fifty or sixty years later, to be no longer the object of pride and satisfaction which it had formerly been, and was wholly rebuilt by them out of the benefactions which they had from the two queens of Henry, out of the greatly-increasing revenues of land in that day, and from the ordinary sources of clerical income. It was a time when nearly every church in this country was being rebuilt, and if the foundation of any part failed, the work would be likely to show the failure as soon as the load was brought upon it, and be rebuilt as soon as was necessary or convenient.

The printed matter bearing on this question has grown largely of late years and is scattered through different publications. I cannot pretend to have re-read the whole of them so as to see what weight it ought to have as against this theory. If, however, Mr. Reeve, who has not so far dealt with it at all, but is no doubt familiar with the whole subject, will look at the alternative propositions, I cannot help thinking he will see cause to doubt the evidence of Harold's work in the existing fabric.

I am, yours &c.,

THOS. BLASHILL.

10 Old Jewry Chambers, London, E.C.  
November 28.

#### Dublin Museum Competition.

SIR,—As your columns are at all times open, in the interests of the profession, to assert rights and redress wrongs, perhaps you will permit me to call attention to the jobbery at present going on in Dublin connected with the above competition.

I notice the *Irish Times* of Thursday last contains leading articles and letters—all tending in the same direction—to overthrow the present competition and change the site, which has been chosen after due consideration; and we read of meetings at Dr. Lyon's house to receive and consider any design that may be submitted, and this, too, going on whilst the Select Committee are engaged upon plans already submitted. It is satisfactory to know that Dublin architects are not willing to be connected with this jobbery, and have unanimously refused to endorse the views of this self-appointed committee, and it has been reserved for a civil engineer to submit plans.

The drawings of the chosen competitors are now on view, and they have to be thankful that the Select Committee is composed of gentlemen, who seem determined to do their duty, and who will doubtless ignore the pretensions of men whose motives and actions tend only to confusion and discontent, and whose ideas as to site are indeed late and fruitless.

Yours obediently,

JUSTITIA.

### NOTES ON NOVELTIES.

#### New Automatic Electric Speaking-tubes.

Shortly before his lamented death, Mr. George Jennings, of Stangate, Lambeth, completed a patent (Jennings & Brewer's) for the above noted very useful appliances, that has since been effectually carried out by the firm, and the new tubes are being constantly fitted up in different parts of London and the provinces. We had recently an opportunity of testing the success of the invention in a large business establishment in the City, where the automatic tubes are carried over a great extent of area and into about twenty different departments, the use made of them being almost uninterrupted, and the testimony of the principals (who courteously offered us every facility for inspecting and testing their efficiency) being unqualified in their praise. The difference between the "ordinary" speaking-tubes and Jennings & Brewer's electric ones, and the greater simplicity in application of the latter, are very marked. It will be remembered that in setting up a range of the common tubes a separate one and connections must be provided for each room or place to which it is desired to establish communication; and as the pendant has to be constantly removed from mouth to ear, the conversation is, to say the least, disjointed, and not always so satisfactory as may be wished. In Mr. Jennings' patent one mouthpiece at the different points of communication only is required. In connection with a central tube carried over the building, with branches into the various rooms it is desired to hold communication with, the act of lifting the mouthpiece, ringing a bell at the point to be spoken with, which bell continues to ring to call attention until the mouthpiece at the point in question is raised, when it ceases, and by means of an earpiece connected with the tubes an uninterrupted conversation can be carried on. A detailed description of the entire working arrangements of this system of communication cannot be made so clearly apparent in the absence of diagrams, but we may remark that an electric battery (Léclanché's is the one adopted by Messrs. Jennings) is fixed in the basement, and from this the tubes and wires are carried to each room. Between each floor and cutting



of the central tube is a box containing a valve for opening or closing communication with the various rooms. The cross tubes start from a point close to the valves into the different rooms, whence they finish with the mouth and ear piece and the bell or gong before mentioned. In the head office the usual dial is fixed, with the "pushes" for each room. When desiring to speak to any of the departments the "push" is actuated; this opens the valve, which acts obliquely, and, closing communication on the one side, opens it direct to the required room. Then the mouthpiece is raised, which sets the gong vibrating at the desired point; and as soon as the attendant there raises his, the gong ceases to vibrate, and the conversation goes on. But the gong will continue to ring if one mouthpiece is dropped but the other held up. The usual index figure is also applied to the dial, and can be utilised for the working. We may add that in every instance where the electric current is set in motion the circuit is made complete. In addition to the automatic electric speaking-tubes, Messrs. Jennings have now entered extensively into all kinds of electric apparatus, such as bells, lightning-conductors, burglar alarms, &c., and this new addition to their business promises to be as successful as that of their sanitary engineering, with which the name of the late Mr. George Jennings was so long and honourably associated.

### TOWNS IMPROVEMENT.

**Mid-London Market.**—A new project is set on foot for constructing markets in the neighbourhood of the Thames Embankment between Waterloo and Charing Cross bridges, on some low-lying land behind the public gardens, and very near to the Savoy Theatre. The authors of the project claim unusual advantages for this site, the railway, the river, and the wide roadway of the Embankment being at the very doors of the contemplated market. Notice has been lodged of a Bill applying for powers from Parliament to construct a new street from the corner of Savoy Street and the Thames Embankment to Villiers Street, with intervening outlets to the Strand by way of Buckingham Street and York Buildings, and for the formation of a loop line of railway, partly beneath this new street, from Charing Cross (District) Railway Station, and passing under some of the market buildings and rejoining the Metropolitan District Railway at a point near the bottom of Savoy Street. The project also seeks for powers to erect on the north side of the new street the markets, in four divisions, separated from each other by the streets intervening, but connected together by glass awnings. These markets will be built to a height of about 30 feet above the embankment roadway, but over their rear parts will be raised on columns lofty blocks of buildings, for the market hotel and for offices and chambers, with a high level terrace in front, a continuation of Adelphi Terrace. This terrace will cross over the streets dividing the market into sections by means of iron bridges having staircases at intervals down to the market floor, and the blocks of lofty buildings will fill up the gap between Somerset House and Adelphi Terrace, and will give to the architects an opportunity of making a respectable-looking riparian façade. Each section of the markets will have a basement underneath, with railway sidings; also inclined cart roads leading to the street-level, lifts, and staircases. These basements will be connected with each other by subways, and will be used as markets and stores, and, according to the notice in the *London Gazette*, refrigerators and vaults on a large scale will be provided. The landing-stages at Waterloo Bridge are proposed to be used for landing sea-borne fish, which may be brought up by the river Thames. The Metropolitan District Railway (being in connection with the general railway system of the country) will deliver all kinds of produce direct into the market, and the new street approaches, together with the wide roadway of the Thames embankment, will give ample facilities for removing away the goods bought and sold in the market. Messrs. Benison & Bargman are the architects to the scheme, and Mr. E. Wilson is the engineer.

### CHURCH BUILDING AND RESTORATION.

**Fulmer, Bucks.**—This parish church was reopened on Saturday last by the Bishop of Oxford, after being enlarged and re-seated. The works executed consist of a new south aisle in the Perpendicular style, with open timbered oak roof. The old seats from the nave have been removed; the organ has now been placed near the chancel; and by removal of the gallery at the west end, the tower has been thrown open to the church. All the new seats are executed in English oak, those in the tower being raised for the children; the aisles, &c., have been paved with Minton tiles, and the whole has been thoroughly heated. Some old memorial windows had to be preserved, and some old glass adapted to the new windows, which has been done by Messrs. Egan & Fletcher, of Regent Street; and all other works have been executed by Messrs. Fassnidge & Sons, of Uxbridge, under the superintendence of Mr. Alex. R. Stenning, F.R.I.B.A., of 27 Fenchurch Street, E.C.

**York.**—Mr. Fisher (Messrs. Gould & Fisher) has prepared plans for the proposed restoration of St. Crux Church. The clerestories will be taken down and rebuilt, also most of the nave arches and some of the pillars, which have lost their proportion. The decayed tracery of the windows will be restored, and the timbers of the roof replaced by new ones. It is intended to lay the foundation of a tower, the bells being fixed in a temporary chamber, the tower to be rebuilt in its entirety as circumstances permit.

**Glasgow.**—The foundation-stone of the new Broomloan Hall and parochial buildings, now being erected in Broomloan Road, Govan, was laid on Saturday. The front of the new building is of a simple character, rusticated in the lower part, while the upper part is plain and surmounted by a bold cornice. At the south corner of the front is a wide, deeply-recessed doorway, with coupled shafts on either side. Through this doorway access is had to a large entrance vestibule and staircase, from which the large hall is entered. The area is divided into three parts, the two side divisions being separated from the centre by arcades of three arches each. Altogether the hall will accommodate about 640 persons. Fronting the road, on this floor, will be a large classroom for about 120 persons, lighted by four large side windows. On the upper floor there will be three classrooms—two with open timber roof, partly glazed for lighting, and one with side windows—capable of accommodating about 180 persons. The classrooms will all be heated by open fireplaces and the large hall by hot-water pipes. The whole works will be executed at a cost of over 2,000*l.* The architect is Mr. John Honeyman.

**Chadderton.**—The foundation-stone of the church of St. Luke has been lately laid. Messrs. Stott & Sons, of Oldham, are the architects. The church is to furnish accommodation for 750 persons, being in general plan a parallelogram, comprising nave and aisles.

**Manchester.**—The new parish church of St. George at Mossley has been opened. The church has been built from the designs of Mr. A. H. Davies Colley, and consists of nave with aisles and chancel, and tower, which, when completed, will be 90 feet high. The chief contracts have been carried out by Messrs. Edward Marland, J. Robinson & Sons, and J. Pickford, of Mossley, and by Messrs. Butters & Carson, of Manchester.

### GENERAL.

**Mr. James Sully** on Monday delivered a lecture on "Colour in Relation to Art" at Newcastle-on-Tyne, to the members of the Literary and Philosophical Society; the title of a second lecture on Wednesday being "How the Eye Interprets Pictures."

**Mr. J. F. Christy**, of the Knole, Springbourne, who founded and endowed St. Clement's Church, is about to present to that church a reredos costing about 2,000*l.* It is being executed by Mr. Seale, from the designs of Mr. J. D. Sedding.

**Mr. W. H. Kendrick** will deliver an address at the meeting of the Birmingham Architectural Association on Tuesday.

**Mr. J. Watt Sandeman** has prepared the first section of a plan for the construction of a fishery harbour at the Green Haven, Berwick, which is to be proceeded with at an estimated cost of nearly 25,000*l.*

**Mr. T. Longridge Gooch, C.E.**, has lately died at Gateshead, aged seventy-five. Mr. Gooch was apprenticed to George Stephenson, and was his chief draughtsman in the construction of the Manchester and Liverpool Railway, and his principal assistant on the London and Birmingham Railway.

**The Bishop of Worcester** has defrayed the cost of the erection of a mission chapel to the parish church of Hartlebury. The chapel is a specimen of the half-timbered style of the county.

**A Diploma** signed by the Queen will henceforth add to the distinctions of members of the Royal Society of Painters in Water Colours.

**The Stoke-on-Trent Board of Guardians** on Wednesday decided to erect a new workhouse hospital, at a cost of 13,000*l.*, according to plans prepared by Mr. C. Lynam. Accommodation will be provided for 176 patients.

**The Municipality of Paris** have decided to erect in prominent places posts for signalling to the police offices in case of an alarm of fire, robbery, riot, or other mishap. In a box at the top of the post eight buttons are fixed, and directions given as to their use.

**A Portrait of the Earl of Dalkeith**, painted by Mr. W. W. Ouless, R.A., was on Saturday last publicly presented to Lady Dalkeith.

**The York Architectural Association**, now constituted, held a meeting last week under the presidency of Mr. W. Brown, architect, when rules for the society were submitted by the committee. Mr. J. Perry will read the first paper.

**The Liverpool Health Committee** have decided not to allow the further adoption of the electric light for shops in the town until the matter has been dealt with by the Council.



# The Architect.

## THE ROYAL PALACE OF JUSTICE.



If we ask leave, within our circle of art, to regard the demonstration of last Monday in the light of an act of homage to the late GEORGE EDMUND STREET, no generous heart will refuse us permission. One of the greatest architectural works of the Victorian age has been successfully completed for occupation and use, and publicly inaugurated by the Sovereign. One

of the most important and most dignified of all the professions, that which has charge of the administration of justice, has taken possession of the edifice with imposing ceremonial and effusive enthusiasm. Add to these considerations the peculiar circumstance that the building as a work of art represents the crowning effort of a long and honourable revival of a most interesting and romantic style of design, which has now exhausted its historical function and in this very work expended all its force, and it is easy to feel that the occasion is one which would undoubtedly have placed the architect, had he not died in harness on the eve of the completion of his task, in a position singularly proud and meritorious.

Seeing that revival is the order of the time in English architecture, there are very few, we should suppose, who would grudge to the revival of mediævalism the opportunity of displaying, as it has done, all its glories in such a building as the Law Courts. Next to the Church, and not excepting Parliament itself, the Law may well claim at the hands of Englishmen all the traditional influence which belongs to the most complete identification with the earlier history of the country; and even the most classical taste may therefore be invited on the present occasion to concede the propriety of our having a Gothic edifice in which to accommodate the venerable business of Law. If as suitors we must still walk up and down a *Salle des Pas Perdus*, it seems better that it should be under the vaulted roof of a "Romantic" hall, than amidst the dainty decorations of a pseudo-Greek or Roman gallery. If we are still to lose our actions, or occasionally to win them, they may be more appropriately lost or won in Courts where the surroundings are suggestive of the impress of dim and even grim antiquity, than in chambers whose features would carry nothing to the eye but one or another kind of prettiness, perhaps an affectation after all. Our Royal Palace of Justice, imitative as it is, will at least tell future generations that in the latter half of the great nineteenth century the heart of England was still beating in unison with the old times which may in those days be somewhat forgotten. Our Cathedrals are Gothic; our Legislative Chambers are Gothic; and our Courts of Law are now Gothic; and so far so well.

Granting this, we may certainly be permitted to go on to say that, if the new Palace was to be designed in the mediæval mode, the late Mr. STREET was, perhaps before all others of his school, the right man to design it. The contest of architects is still vividly remembered by all but the very young: how Sir GILBERT SCOTT put forth his strength in dainty but somewhat emasculated grace; how Mr. EDWARD BARRY won high honour by careful work, only too mechanical and metallic for the style; how Mr. WATERHOUSE, foremost in the race at the first, fell out at last because advanced criticism, if it rejected such a rendering of Gothic as SCOTT'S or BARRY'S, could still less tolerate the reading of a "Manchester man"; how Mr. GARLING'S polish, Mr. SEDDON'S adventurousness, Mr. LOCKWOOD'S courageous provincialism, and Mr. ABRAHAM'S matter of form, all attracted attention in their several ways; how confusion of opinion sprung up and became worse confounded; and how at last somebody cut the knot that could not be untied—rumour said it was Mr. GLADSTONE himself—and the project of Mr. STREET, which nobody had ventured to admire, unless very much in private, was suddenly brought to the front and declared the winner. Nor do we yet forget the unsuccessful demand of Mr. BARRY for a partnership share, on the ground of a certain preference accorded to his plan by mere compensation surveyors who had singularly but characteristically enough been called in by the Government to report

on the designs. The terrific troublousness of Mr. AYRTON, also, and the little vagaries of Mr. LOWE, we have not yet forgotten in the calm that came so welcome to the architect at last, and gave him heart to pursue his gigantic enterprise, as he did with infinite labour, but with infinite delight, until one day he was struck down by the sheer fatigue of an indomitable soul, and died of the hard work that he had so long and so resolutely done.

STREET was, every inch of him, a downright Englishman, and this work of his has been done in that thoroughly robust English spirit which all over the world confronts difficulties and dangers as incentives only to greater effort, greater self-confidence, and greater endurance. A more courageous man in his way never lived in England, or out of it. If we provoke a smile, no matter; but every line of his pencil was a blow. His work was fighting work from his boyhood till his death. He was the perfect embodiment of the Romanticism militant of his generation. In a Gothic age he was wholly Gothic, the most Gothic of all the Goths. In a Classic age he would have been no matter what or where, but he could never have been Classic. If the simile be worth anything, we would say he was emphatically the square man in the square hole, the round man in the round hole has a certain freedom to move, which to his temperament would have been insufferable licence. He knew his fate and he knew none other, and he was master of his fate therefore.

His great work now in question was wholly like himself. If we were at this moment called upon to criticise it, or even to describe it, we could not, after what we have said, attempt to do either. We prefer—and here we venture to speak for a large body, both of his adherents and of his opponents in taste—to look upon him as a great artistic shadow of the past, whose noble monument stands before the world to-day, without fear as without favour, criticism out of place, description needless: "The man rises before us amidst contradiction and debate like a granite mountain amidst clouds and winds; wit of the best may be tried against him, but it cannot avail; what is the wit of a thousand wits to him?"

Whether the Royal Palace of Justice is destined to be a popular work or an unpopular it is not possible to foretell. More will depend upon non-artistic considerations than upon anything else in the settlement of its appreciation in respect of art. Such is the way of the world, and in England especially. The handy manner in which Mr. WATERHOUSE contrived his Law Courts at Manchester did more than to popularise secular Gothic architecture than would now be readily believed; and if it should turn out that Mr. STREET has provided for the occupants of these Law Courts in London equally acceptable conveniences and comforts, the credit of this will be assigned to the admirable qualities of Gothic plan, and a corresponding admiration of Gothic construction and decoration will be the certain consequence. It is too late now, as mere matter of fashion, to expect another great edifice to follow suit, but what we may look for, if all should go as well as we are supposing, is at least that negative kind of honour to an exhausted mode which supplies contempt and derision for its successor. But, on the other hand, it is to be feared that if the lawyers should happen to take a dislike to the arrangements of their new home, no amount of poetic sentiment will tie their tongues, or induce in them the toleration of a style of high art which has failed to produce the perfection of common convenience. To discover which of these destinies is to attach to Mr. STREET'S magnificent work we must wait on time.

Although we consider the present occasion unsuitable for criticism, this at least we must say—that as an artistic production, every Englishman who, whatever may be said of sweetness and light, is proud of English muscularity of mind and work, may be called upon to regard the Palace of Justice, quite dogmatically if he pleases, as the extreme of artistic vigour and manly virtue. What gives to this proposition especial force and especial interest is the circumstance that the architect designed everything with his own hand, and with a profusion of variety which might seem incredible until it is proved by actual examination. No problem was too great for him to attack at once, and at once to solve. None was too small for his plodding perseverance. The amount of work that was in the man day and night was stupendous; the degree of patience equally incomprehensible. The same indomitable readiness of pencil, the same unconquerable love of his work, the same inexhaustible store of knowledge, the same perfect assurance of faith, one day would conquer the construction and effect of



the grand Central Hall, and the next condescend to the design of a keyhole or a button. Those of his brethren who followed him the summer before last in the well-remembered excursion over the great edifice, will never forget the impression produced upon their wondering minds by his modest acknowledgment of the vast amount of his personal draughtsmanship displayed in the hundreds upon hundreds of elaborated sheets of design and detail which were partially displayed for their inspection. Some may have thought for a moment that the pace was too fast to last. So it has proved to be. May he rest in peace—one at least amongst the greatest and truest artists of the modern world.

### THE GROSVENOR GALLERY.

THE managers of the Grosvenor Gallery follow up the scheme, first initiated on a large scale by them, of exhibiting the gathered works of a living artist; while this winter season they have added a collection of pictures by the young landscape painter, CECIL LAWSON, recently deceased, to whose immature but powerful performances no tribute could be expected from the Academic body, such as it has paid to distinguished members within its own circle or to such outsiders of indisputable mark as the two painters to be honoured in the forthcoming exhibition. The choice of Mr. ALMA TADEMA, R.A., as the contemporary artist to be "illustrated," proves both interesting and instructive in many ways. The pictures of this painter are so individual in mannerism, so supreme in executive skill, and so novel in subject within English exhibitions, that he is likely to obtain a position and an influence out of proportion to the absolute worth of his work taken as a whole. Freshness is a factor of great strength in the forming of public favour, and although Mr. ALMA TADEMA has now been working amongst us for a considerable period, the novelty of his subjects and his manner has not had time to wear off, and he has not suffered the misfortune of such a following of feeble imitators as in the case of popular masters often serves to sicken the public with the imitations of theme and method. The assemblage of one hundred and eighty-four pictures and studies in oil, water colour, and black and white, taken from this point of view, thus offers the first opportunity of judging this distinguished artist quite fairly in his full maturity; gives that test which, in the recent exhibition of the works of a painter in a diametrically opposite school—Mr. WATTS, R.A.—resulted in so remarkable a tribute of opinion. It would be absurd to draw comparisons, and such is not our purpose; but it is worth noting how differently these two artists, whom, measured by our modern levels, we must both call great, bear this test. While the painter whose strength lay in imaginative and intellectual energy, and in the possession of that manner, the expression of æsthetic power, which constitutes style, gained to an astonishing extent by the assembling of his collected works, Mr. ALMA TADEMA on the whole certainly loses, in spite of the remarkable display of his talent set forth in the collection before us, in spite of that command of the technicalities of art in which he is almost without rival on this side of the Channel.

The reasons for this falling short of such full meed of applause as might have been expected are not far to seek. Mr. TADEMA's invention hardly ever, if at all, steps over the line which separates invention from the higher creative gift of imagination; his aspiration and his success are not after the ideal, but in the real and the superficial or physical. His sense of beauty seems confined to the placing of harmonious colours, the suggestion of pleasant thoughts, the imitation of graceful gestures; and within a range of art bounded by such limitations, and further restricted by a deliberate choice of antiquarian subjects, a painter, be he never so strong in art faculty, loses rather than gains by a display of his sole work. Nevertheless, a collection of this painter's pictures and a summary of his art was well worth striving for, and the result gives ample pleasure and profit. The gathering is very complete, ranges over thirty years in time, and offers, so far as we know by experience in international exhibitions and elsewhere, ample illustration of Mr. TADEMA's range of subject and scale. Not Professor EBER's himself, whose archæological novels are the counterpart in literature of his friend Mr. TADEMA's art, could revive for modern enjoyment with greater detail and actuality the private and public life of the degenerate Romans, the manners and customs of Egypt, or the aspect of early mediæval times. His interiors present a very inventory of "historic

remains"; his *dramatis personæ* enact their parts in appropriate costumes, with the dexterity of the most perfectly-contrived marionettes.

"There's the rub!" Despite the accuracy of studied expression and aptly-conceived attitude, Mr. TADEMA's men and women, be they Roman, Egyptian, mediæval, or modern, do for the most part remain not human creatures, but cunningly-devised puppets. On a small scale this is not so evident, but when those clever little scenes, which are so truly enjoyable and so singularly complete in all narrative material, are treated on an enlarged plan, then the unflesh-like flesh and the inflexibility of the painter's human creatures become obvious, the dryness and curiously enamel-like technique become pronounced as unfit for the artistic representation of that uniquely vital thing—the human form in life and action. The most important pictures here will be found to confirm this statement, namely, *A Roman Emperor*, the episode of the Pretorian Guard and the coward Claudius, almost the strongest in dramatic conception of the many dramatically devised scenes; *The Death of the Firstborn*, Mr. TADEMA's most impressive effort; *The Education of the Grandchildren of Clothilde*; *A Sculpture Gallery*, an ingenious portrait group; *The Vintage*, *A Picture Gallery*, *Fredegonda*, and the portraits of *Herr Barnay* and *Mr. Whichcord*. In certain female nudes—*A Sculptor's Model*, *Tepidarium*, *After the Dance*—in the exquisite group of profile heads of girls called *An Audience*, also in the portrait of *Herr Hans Richter*, Mr. TADEMA appears to make some deliberate effort after the qualities of true flesh-painting, and there are certainly passages of brilliant quality in the second and fourth named of the above group of works. The head of *Cleopatra* (129) has also some mellow and flesh-like aspects. These are, however, all exceptions to the rule. Yet how much is left to enjoy, after all limitations are accepted, in an art so individual!

Realism of still life—when carried to perfection of imitative skill, as in the forms, the materials, and the illusive perspective before us—has enormous power of appeal from a dramatic point of view, and produces, in fact, the same impression of unity as the appliances of the modern stage, while the art employed is of course real and legitimate. The inventiveness of "situations," the sly often caustic satire, the rollicking fun, and the occasional tenderness which Mr. TADEMA puts into his subject pictures, are perhaps all the fresher and more interesting from the archæological dress in which he arrays the sentiment. If we were asked to name the pictures in which a pulse of real feeling and of poetic significance beats most tangibly, we should name, not the imposing canvases which impress by the square foot, but such gems of the artist's skill as the two Flemish interiors, *The Nurse* and *Sunday Morning*, *A Pastoral*, *A Harvest Festival*, *Departure*, and *A Hearty Welcome*. The work which brings the realism of things strange and long ago into closest connection with a powerful dramatic motive is still *The Death of the Firstborn* (1872), while the best composed design and the finest study in figures in action by far is *The Pyrrhic Dance* (1869).

The water-colour drawings gathered in the small room are chiefly studies for the oil pictures, or replicas of them on varied scale in the water-colour medium, in the use of which Mr. TADEMA attains a singularly fine quality of tone and manipulative delicacy.

We had reserved to a last paragraph the only picture in the gallery which will be new to a majority of the public, and, to some degree, to all, inasmuch as the artist continued to work upon it after the opening of the exhibition, when only an empty frame greeted disappointed expectation on the days of the press and the private view. Even as we go to press, *Cleopatra* (1882) still remains in the artist's hands, and the frame yawns open on the gallery wall.

The gathering, together at the Grosvenor Exhibition of the pictures and drawings of the late CECIL LAWSON is a kindly and deserved tribute to an artist whose brief career was marked by something more than promise of distinctive talent. The sudden popularity which befell the painter after his first success in this gallery was as little just as previous repulse or subsequent indifference, and the present occasion may seem an opportunity for unprejudiced readjustment of opinions. The verdict of "those who know" is likely, however, to be of somewhat doubtful bias. That the interpretation of nature by CECIL LAWSON had a certain power of generalisation and a largeness of motive it were unfair to deny. In the drama of the heavens he was an observant student, and his pictures of



cumulus cloud rolling through the blue over the Yorkshire moors or lying in piled lustre above horizons of rich woodland, of weird effects of moonlight illuminating the river mists or struggling with drifts of storm cloud, together with many other such records of atmospheric effect, show no common intelligence and power of artistic expression. Throughout all his work, however, even to the last, defective training was patent; he never got right about perspective relations in any complex subject, and what his admirers called the "manner of the impressionist school" was oftentimes simply incapacity of the artist to carry out with solidity and precision his own conception. That Mr. LAWSON struggled to attain greater accuracy of form and coherency of artistic expression is certain, and if life had been granted him, his industry and enthusiasm might possibly have won him a high permanent position among English landscape painters. Although his scheme of colour was artificial, he painted and studied out of doors, and the brilliance of his atmospheric effects, in spite of a certain opacity of palette, was the reward. It must now for ever remain an unanswered question whether an art which aimed at large generalisation and dramatic unity of effect, without having the superstructure of close and exact knowledge, could ever have had a healthy development and maturity; but an examination of the work this clever young artist has left behind him—there are 106 pictures and drawings in this exhibition, by no means all he executed—has impressed us with the conviction that, like many another painter, having attempted to run before he could walk, he would never have obtained firm footing in the way that leads to lasting fame.

#### BISHOP WORDSWORTH'S "GREECE."\*

WHEN the Rev. CHRISTOPHER WORDSWORTH, M.A., Head Master of Harrow School, published his "Athens and Attica," there was less interest in the topography of Greece than there is at present. "Classical Geography" was taught in some schools and colleges, but the books on the subject were the dreariest of compilations, and would seem to have been prepared for the torture of students. All this arose from ignorance of the countries, and especially of Greece. The Grand Tour which was followed for some centuries was limited in its extent. In the early part of the century GELL said: "We are at present as ignorant of Greece as of the interior of Africa," and half a century ago few Englishmen ventured so far as Athens. Although the fate of BYRON and the War of Independence gave a new interest to Greece, there were many districts of the country which remained unknown to Western travellers. It was impossible at that time to obtain a map of Greece that was even approximately correct, or one in which ancient and modern names of places were not jumbled together. That excellent scholar, the late GEORGE LONG was, in consequence, not able in those days to decide whether Olympia stood on the north or the south bank of the Alpheus. There were the volumes containing the travels of GELL and LEAKE, and the older books of DODWELL and CHANDLER; but somehow they were not utilised for students. The credit for the first attempt at producing a description of Greece which was at once popular and scholarly must be given to Dr. WORDSWORTH. The small book on "Athens and Attica" was followed by "Greece, Pictorial, Descriptive, and Historical." This volume has hitherto not obtained the success it merited. The beauty of the illustrations may have been obnoxious to some people who consider that archæology resembles mathematics, and that a book on the subject is not adapted to a drawing-room. But unless we are mistaken, the principal objection to it has been that it was the work of an Englishman. By some fatality we have come to regard German scholars as the only acceptable authorities on questions connected with classic archæology, and if Dr. WORDSWORTH'S book had been printed in a German town and bore the name of a German professor on the title-page, a translation of it would have been before now in use wherever the English language is spoken. Let us hope that in the new form in which it has been published by Mr. MURRAY, Dr. WORDSWORTH'S "Greece" may secure that attention which it deserves.

\* Greece: Pictorial, Descriptive, and Historical. By Christopher Wordsworth, D.D., Bishop of Lincoln. New and Revised Edition. Edited by H. F. Tozer, M.A. With 400 Illustrations of Scenery, Architecture, and Fine Arts: London, John Murray.

A book of the kind could only be produced by a scholar who has ancient history and the classics at his finger-ends, besides a power of summoning historical associations on seeing certain natural or artificial objects. This is a power which is not possessed by all. COLERIDGE, for instance, confessed that if he walked over the plain of Marathon it would be to him no more than any other plain of similar features, although he could take an interest in the description of the battle in a book. It is possible to go prepared to a country with a stock of quotations, and to seek for places to which they may be adapted. ADDISON adopted this plan for his classical tour in 1701. "Before I entered on my voyage," he says, "I took care to refresh my memory among classic authors, and to make such collections out of them as I might afterwards have occasion for. I must confess it was not one of the least entertainments that I met with in travelling to examine these several descriptions, as it were, upon the spot, and to compare the natural face of the country with the landscapes that the poets have given us of it." In the same way GIBBON prepared himself for his Italian journey by a study of the "Italia Antiqua" of CLUVERIUS, "a learned native of Prussia, who had measured on foot every spot, and had compiled and digested every passage of the ancient writers," and this work was supplemented by the descriptions of Italy by STRABO, PLINY, and others. Dr. WORDSWORTH does not inform us of the preliminary labour that he undertook before writing his book. But the allusions in his book suggest that, like CLUVERIUS, he merely tested by travel what he had before drawn from ancient authors.

The arrangement which would serve for an ordinary book on geography would be ill-adapted for a literary work of the character of "Greece: Pictorial, Descriptive, and Historical." An ingenious plan has been followed by Dr. WORDSWORTH. He conducts his reader first to the heights of Zygo, from whence, as a point of vantage and by the aid of imagination, a panorama of the entire mainland may be beheld. By following the mountain ranges and the rivers which are connected with Zygo we are enabled to understand the physical conformation of the country. A knowledge of the mountain systems of Greece is almost as necessary for the student of history as is a knowledge of the skeleton to an anatomist. The character of the people was in a great measure the result of those natural barriers which separated the states and allowed of various degrees of development.

After describing Greece as a whole, Dr. WORDSWORTH takes up the different states, and begins with Attica. Matter-of-fact people are often disappointed on visiting that part of Greece, and cannot understand how a country which has nothing to compare with the Thames can have held such a position in the world's history. Cardinal NEWMAN, with gentle sarcasm, suggests what kind of report a man of that class would prepare after travelling through the triangular Attica. He would note the unsatisfactory soil, the narrow streams which are not always full, the limestone hills, the pasture for sheep and goats, and such products as figs, oil, and olives. Attica would be to him a commonplace country, as it is to many others. But to those who are in search of beauty this part of Greece can offer much on sea and land which will not be found elsewhere, and no other land with so limited an area possesses so many sites which are hallowed by noble deeds. Taking his stand on Mount Agaleos, Dr. WORDSWORTH reminds his readers that it was from thence XERXES beheld the battle of Salamis, where the invader's hopes of a mastery of Greece were frustrated. In the "Persians" the scene has been described by ÆSCHYLUS, who was one of the combatants:—

Deep were the groans of XERXES when he saw  
This havoc; for his seat, a lofty mound  
Commanding the wide sea, o'erlook'd the hosts.  
With rueful cries, he rent his royal robes,  
And through his troops embattled on the shore  
Gave signal of retreat. Then started wild  
And fled disordered.

Two of the Persians heard the hymns which were chanted in the procession of DIONYSIUS from Athens to Eleusis, and in relating the incident Dr. WORDSWORTH takes the opportunity to tell us something about the Eleusinian Mysteries, and how ÆSCHYLUS was once summoned on the charge of revealing them. Another of the great dramatists is introduced when describing Mount Parnes, which separated Attica from Boeotia, and, it may be said, dulness from brilliancy. It was from Mount Parnes that ARISTOPHANES represented the goddesses



as being summoned to Athens in the burlesque of the sophistry of which SOCRATES was supposed to be a type. We are reminded that one of the characteristics of ARISTOPHANES was the introduction of allusions to local scenery :—

With the "Chorus of Clouds" the audience might suppose itself looking down upon the objects of which they speak as then visible to themselves—to see the land of PALLAS stretched out below them, and the lofty temples and statues of Athens at their feet ; to trace the long trains of worshippers in festal array traversing the hills to the Sacred Mysteries of Eleusis ; to follow the sacred processions winding through the streets to the Acropolis of the Athenian city ; to witness the banquets and sacrifices on solemn holidays ; to behold the crowds seated in the theatre at the beginning of spring, witnessing the dances and listening to the melodies which there give an additional charm to that season of festive joy.

In another part of the volume it is explained that the tragedians, on the contrary, ignored the local scenery. In this respect they resembled the Greek painters. Allusions to the streams and to Hymettus are to be sought in Roman rather than in Grecian writings, and "if our knowledge of the geography of Attica were to be gathered only from the extant works of ÆSCHYLUS, SOPHOCLES, and EURIPIDES, we should not be acquainted with the name of a single mountain on the Athenian soil."

One of Dr. WORDSWORTH'S maxims is, that "much historical ore may be smelted from mythological minerals," and accordingly he interprets the legendary contest between NEPTUNE and ATHENE, which was sculptured in one of the pediments of the Parthenon, as indicating the rivalry between two sections of the inhabitants of Attica. One sought after the wealth which was to be gained by commercial enterprise on the seas ; the other inhabitants, being less ambitious, were satisfied with agricultural and pastoral pursuits. In the legend of the marriage of CRANAUS and PEDIAS he recognises the trace of some primitive effort to unite the inhabitants of the hills with those of the plains of Attica. The importance attached to the tradition that ERICHTHONIUS was the first to yoke four horses to a car is said to have arisen from the fact that in the barren land of Attica a horse was reared with difficulty, and was expensive to maintain. The possession of four was an indication of the greater diffusion of wealth consequent upon the successful cultivation of those arts and manufactures which began to flourish at that period.

It is shown by Dr. WORDSWORTH that the legends connected with places exercised much influence on the affairs of the Greeks. Both Marathon and Thermopylæ were associated with the mythic deeds of HERCULES. At Marathon his daughter offered herself as a victim for the liberty of her people ; it was there his sons routed the army of EURYSTHEUS, and it was there the Athenian hero THESEUS had destroyed the Cretan monster. The Spartan kings were supposed to be descendants of HERCULES, and at Thermopylæ it is not too much to imagine that LEONIDAS believed that the battle-field, which was overlooked by Mount Ceta, where HERCULES died, had been fixed by the favour of the gods. "The Spartans," says Dr. WORDSWORTH, "while they saw the countless hordes of Persia in their front, and while the Immortals of XERXES were rushing to the charge in their rear, had above them the summit of Mount Ceta ; and then, in the last hours of their life, they drew courage and hope from the reminiscences which it supplied of their great ancestor—of the labours which HERCULES had undergone, of the death which he had there suffered, and of the glory which he had won." If BONAPARTE could appeal to the forty centuries which looked down from the Pyramids upon the adventurous Frenchmen in a strange land, it is not improbable that in Greece the past could likewise be united with the present and made to inspire great deeds.

The interest of Attica reaches its height in the capital. "Where'er we tread 'tis haunted, holy ground." Dr. WORDSWORTH says truly that to describe Athens aright the writer should be an Athenian. However great may be his enthusiasm, the ruins can never suggest to a modern what the city was in the days when it attracted men of all nations. Dr. WORDSWORTH describes what is left of ancient Athens, and, as in other parts of his book, explains the relation of the conformation of the place itself to the events which have been transacted there. Let us take one example—the Pnyx, or place of assembly—where all that was done by art was the excavation of the rock at the south side and raising the north wall :—

To form an idea of an Athenian assembly in the flourishing

times of the Republic we must imagine this open space, consisting of about twelve thousand square yards, occupied by nearly six thousand citizens seated in groups within it. In the presence of this vast multitude, one man arises ; he ascends the stone steps, and takes his station on the pedestal which is called the Bema, at the centre of the perpendicular rock. He has before him not merely these six thousand Athenians, but the city of Athens. Lying at a little distance beneath him, he beholds the Agora, filled with statues and altars and temples, and he is thus brought into the presence of the great men of old, the heroes and deities of Athens. Beyond it he sees the Areopagus, the most ancient and venerable tribunal of Greece ; above it, on the right, is the Acropolis, presenting to his eyes the wings, the portico, and the pediment of the noble Propylæa ; towering above them in the air, and looking towards him, is the bronze colossus of ATHENA PROMACHUS, armed with helmet, spear, and shield, appearing from her proud eminence to challenge the world in defence of Athens. Rising in severe and stately splendour to the right is the Parthenon, exhibiting its front of eight huge marble columns, surmounted with sculptured metopes and pediment filled with marble figures of horses, men, and gods, dazzling the eye with painting and with gold. Visible to the north, beyond the city and its walls, are the plains and villages of Attica, its cornfields, its olive-grounds, and its vineyards lying in rural quietness, made more peaceful by its contrast with its stirring scene. Farther in the distance are the castellated passes of Phyle and Decalea, and in the horizon the high mountain ridges of Parnes and Pentelicus.

Such are the objects which the Athenian orator sees *before* him from the pedestal of stone. To his left is the road to Eleusis, the Sacred Way which, passing through the beautiful suburb of the Cerameicus, and by the groves of the Academy, and crossing the stream of the Cephissus, climbs over the western heights of Mount Ægaleos ; visible from the higher ground in the rear are the two long lines of wall which, running along the plain for nearly five miles, unite the city with the Piræus. There are the masts of vessels riding in the harbour—merchants bound for Pontus, Egypt, or for Sicily : fleets which have gained for Athens empire and glory in distant lands—in the islands of the Ægean, in the peninsula of Thrace, and on the coast of the Euxine. Farther to the left is the glorious Gulf of Salamis : on one side of it is the hill on which XERXES sat to view the battle fought beneath him ; and on the other is the cape where stands the trophy of THEMISTOCLES.

Such is the scenery of the Pnyx ; such are the objects which surround the Athenian orator as he stands on its Bema. In *their* presence he speaks. In dread, therefore, mixed with delight, inspired by such a spectacle, he proceeds to address his vast audience, like a general going to a battle, when he sees the flags and banners of his country's glory unfurled and streaming before his eyes.

When we read a passage like the foregoing we can scarcely wonder that among the Greeks so much attention was given to place, or that "where" formed one of the ten categories. The passage suggests the manner in which Dr. WORDSWORTH imparts information, and if it is compared with the corresponding description in "Athens and Attica," the toil undergone by the Bishop will be apparent. He does not write as a mere topographer or a traveller ; from his acquaintance with the past, as it is found in books, he is able to project himself into old Greek life, and what would be in many hands little more than an itinerary, becomes picturesque in the best sense of the word.

From Attica Dr. WORDSWORTH passes to the island of Ægina. The position of the temple (which he believes to have been dedicated to ATHENE) suggests the remark (which may also be found in the "Handbook for Greece") that "the religionists of Greece knew how to avail themselves of two things most conducive to devotional effect—silence and solitude." Then follow descriptions of the remaining states ; and it is needless to say that on almost every page there is something which is interesting. In speaking of Delphi, Dr. WORDSWORTH declares his belief that the Evil Spirit was permitted to utilise the Oracle in order to vent his influence on the world. But, happily, conclusions of the sort are not often found in the book. At Platea it is of course stated that the Asopus and Oëroë are two small rivers—(a fact which was ascertained by LEAKE and STANHOPE)—although in the common translations of HERODOTUS it is said that Oëroë was an island which the Greek captains had resolved to occupy as a protection against the Persian cavalry. The Copaic Lake, which is the largest in Greece, abounded in reeds, and to them Boeotia may be said to owe its reputation for musicians. "The reed," we are told, "furnished instruments for the periodical contests of flute-players in the games in honour of the Graces at Orchomenus, where it grew in the greatest perfection, in the musical festivals of Love at Thespiae, and in those of the Muses at Libethra."



Dr. WORDSWORTH in his travels did not attempt any explorations to identify ancient sites ; but in one case at least he was able to anticipate archæological excavations. BYRON expressed the universal ignorance when in describing ZITZA he exclaimed :—

Oh ! where, Dodona ! is thine aged grove,  
 Prophetic fount, and oracle divine ?  
 What valley echo'd the response of JOVE,  
 What trace remaineth of the Thunderer's shrine ?  
 All, all forgotten.

Colonel LEAKE supposed it to be at Jannina. Dr. WORDSWORTH, conjectured that Dramisus, near Jannina, was Dodona ; and the excavations of M. CARAPANOS are accepted as a confirmation of the theory, but the remains of the buildings are disappointing and the bronzes are of an inferior kind.

It is astonishing how well all the illustrations look, although they are no longer new. The engravings on steel are by eminent artists. For the woodcuts English and French artists made drawings. The majority of the landscapes are by the late Mr. G. F. SARGENT, a draughtsman whose merits were not sufficiently recognised during his lifetime. He never surpassed the sketches in "Greece."

One of the features of the volume is the excellent History of Greek Sculpture, which was written and illustrated with exquisite outlines by Mr. SCHARF. For this edition it has been extended, and refers to the latest discoveries. It may be said with truth that all students of Greek art or Greek literature should possess the Bishop of Lincoln's book. It is unique in English literature.

#### THE DUBLIN MUSEUM COMPETITION.

MR. RUSKIN, in a lecture which he delivered in Dublin some years ago, endeavoured to describe the Irish character, and the defect in it which arrested the national power in other things besides art. "The form of failure to which it is most liable," he said, "is this, that being generous-hearted, and wholly intending always to do right, it does not attend to the external laws of right, but thinks it must necessarily do right because it means to do so, and therefore does wrong without finding it out, and then, when the consequences of its wrong come upon it, or upon others connected with it, it cannot conceive that the wrong is in any wise of its causing or of its doing, but flies into wrath, and a strong agony of desire for justice, as feeling itself wholly innocent, which leads it farther astray, until there is nothing that it is not capable of doing with a good conscience." We have given this passage at length, because it explains some strange doings in Dublin in regard to the competition for the proposed museum. If Mr. RUSKIN were to search through the whole recorded history of Ireland we doubt if he could discover anything more corroborative of the theory which he expressed than the conduct of the Irish architects within the last year. It will not be difficult to show the applicability of Mr. RUSKIN's theory. In the first place, is it not the fact that the Irish architects did not attend to the external laws of right from the very beginning of the competition? The characteristic defect of the Irish designs was that little or no attention was given to the planning. The architects did not seem to have studied the arrangements of any existing museum ; they were not aware of the space which would be required for the collections which existed in Dublin, and consequently, although it is alleged that the premiated plans do not provide for the accommodation of the antiquities belonging to the Irish Academy, we believe it to be a fact that not one of the Irish competitors would be able to state in figures how much space the Academy's collections now occupy. The committee to whom the designs were submitted consisted of five members, and four of them were Irishmen. It could not be suggested that the committee was incompetent or unjust. Mr. McCURDY is one of the best known of the Irish architects ; Colonel McKERRIE is a Commissioner of Public Works ; Dr. MOYERS is, we believe, the son of a builder, and is, or has been, connected with the building trade. Surely these gentlemen ought to be able to decide upon the relative practicability of a number of designs. Then Sir ROBERT KANE, who has been a director of museums for many years, must know what is needed by the public and officials ; while Lord POWERSCOURT, as an amateur, could be trusted to secure that a meritorious elevation was not set aside without some reasonable cause. Yet this committee, which might be supposed to

be favourably constituted for Irish interests, were unable to select a single Irish design. If such a result had followed a competition in any other country but Ireland, it would be said that the architects had not understood the requirements of the proposed building. But, as Mr. RUSKIN says, the people in that unhappy land cannot conceive that a wrong is in any wise of their own causing. Instead of manfully accepting the decision of the committee, and, as is constantly done in England and Scotland, resolving to do better whenever another opportunity arrives, the Irish architects, true to their national character, fly into wrath, and, judging by what has been spoken and written during the last few months, it may be said with Mr. RUSKIN that there is nothing they are not capable of doing with a good conscience. Considering the condition of the professional mind in Dublin at present, Mr. COURTNEY could well say a few nights ago in the House of Commons that "the opinion of Dublin architects on this subject must be received with much reserve." In the statement of their wrongs as well as in the preparation of their plans "the external laws of right" have been disregarded, and it is not to be wondered at if the architects are rebuked from the Treasury Bench. Indeed, the "bother" which has attended this competition has been so wearisome that the officials who maintain the advantages of handing over buildings to Government draughtsmen can rejoice. They may say that if the original arrangements of Mr. LOWTHER had been adhered to, and if plans had been prepared at South Kensington, the museum might by this time have been erected. The Dublin architects are working hard to convince the authorities of the danger of giving commissions to civil architects for public buildings.

The question arises, Do the Dublin architects really desire to have a new competition instituted? They know that in such a case (besides the affront to the committee) the five authors of the second series of designs must be compensated, and that, under the circumstances, the total sum would be several thousand pounds. What Government would venture on a second competition with the chance of such another expense or failure before them? Is it not more likely that the erection of the museum would be postponed for many years, or, if the building is a necessity, that the plans which were drawn at South Kensington would be utilised? In either case the gain to the profession in Ireland is not to be coveted. But what is remarkable about the agitation is that the five designs are not all condemned. It is generally acknowledged that the design by Mr. FREEMAN has qualities which distinguish it from the others. This agrees with what was announced some time ago, that the Committee of Selection had assigned the first place to the same design. If this be true, we may enquire why the design has not been adopted? It can hardly be imagined that the five designs are equal in merit, and so long as there seems to be a difficulty in judging between them, the unsuccessful competitors will make themselves heard. It is needless to say that there is no limit to eloquence in Ireland.

We do not advise the Dublin architects to suspend their agitation, however unworthy it may be of professional gentlemen, for we doubt the influence of reason just now in Dublin. But we are of opinion that it would be politic for the Government to determine the competition without delay. If alterations of the arrangements are required they can be made when the working plans are being prepared. To judge from some of the criticism it would seem that people were of opinion that the selected design is to be handed over forthwith to the builders. In few competitions would that course be advisable. If one of the designs should be superior to the others in arrangement of plan, good lighting, and dignity of appearance, and if these qualities can be secured without extravagant cost, it deserves to be selected. The author's success in dealing with the given site is a guarantee of competency, even should another site be selected.

**Tynemouth.**—The church of the Holy Saviour, which is the church of the Priory parish, was built forty-two years back, and is noted for its want of architectural beauty and the discomfort of its internal arrangements. The vicar, being well supported by the parishioners, called in Mr. F. R. N. Haswell, architect, North Shields, and, under his advice, contracts were entered into for re-seating the church throughout in oak, cleaning, decorating, &c., together with the erection of a new choir vestry, and certain alterations to the small and incommensurate one already existing. The church was reopened on Sunday.



## SUNDRY WORKING DRAWINGS.\*

By J. P. SEDDON.

*(Concluded from page 344.)*

I NOW propose to lead you right across England to the opposite coast of Wales, where it has fallen to my lot to carry out some of the most important works that have been entrusted to me. My first introduction to that neighbourhood was in the year 1863, during which I received a commission from Mr. Thomas Savin, of Oswestry, to whom the principality of Wales owes a great part of its railway accommodation. That gentleman asked me to make a survey at Towyn, in North Wales, where he contemplated laying out for building all the land lying between two of the stations of his coast line. When that was finished he desired me to proceed to Aberystwith by a morning train, so as to be able to advise him in the evening of the same day as to some additions he proposed should be made to the building in that town known as Castle House, in order to convert it into an hotel. This was, as I found it, a large and complicated collection of buildings, of which the nucleus was a triangular structure with an octagonal tower at each corner. This central portion had been built by Nash, to whom London owes Regent Street. Having taken a rapid survey, I made a sketch design for a wing to be built southward of the above-named structure, along a narrow strip of land lying between the road and the cliff. This was intended to contain a large saloon, to serve as a dining-room, about 100 feet long, having eight bay windows overlooking the sea, and at the further end of this was another octagonal tower. Mr. Savin approved this design at once, and desired me to lay out the foundations of it on the following morning, ordering some thirty men to be on the spot to receive my orders. This I accordingly did, after which I proceeded to town to complete and send down the requisite drawings. In order to provide as many bedrooms over this saloon as possible, without interfering with its area by any supports except those afforded by its external walls, I projected the outer face of the first floor to the front of the bay windows by means of arches spanning from one bay to another, and constructed the partitions with queen truss framing, which permitted of openings in the middle of the transverse ones for a central corridor. The longitudinal ones again rested upon these latter, and were framed likewise with openings for doorways in the middle of each of the rooms so divided off. These trussed partitions provided also the strength requisite for a flat roof over the whole, proposed to be covered with asphalt upon concrete, and to serve as a belvedere, whence any number of visitors congregated on it might enjoy the extensive coast and sea views obtainable from it.

This flat was approached by three circular staircases within turrets, from the saloon and bedroom floor and waiters' rooms. Since the conversion of the building into a college this space has been enclosed, and provides a large recreation apartment for its students.

My employer, acting as his own builder, decided to my regret to execute this wing in brickwork, to be covered with cement. This being the case, I designed the upper portion in timber-framed construction, with brick panels to be cemented and ornamented with incised work and coloured so as to produce effect.

During the progress of this southern wing I one day received a summons by telegram from Mr. Savin to go down to consult with him in the evening about the construction of another wing northward of Mr. Nash's building. I was again allowed no time for the preparation of working drawings, but was instructed to proceed then and there to carry out my approved sketch, 500 men being told off to execute the work, the whole of whom I had to keep well employed. This time, however, I was permitted to have my own way as to material, and I consequently selected Bath stone for the dressings, relieved by blue Pennant stone from Hanam, near Bristol, for the columns, and a local cinnamon-coloured stone from a quarry belonging to Mr. Savin for the wall-work. The principal entrance was arranged in the centre of the building at the back, where, there not being space sufficient for any porch of an ordinary rectangular form, I designed the triangular one, which was erected, and gave every facility required. Adjoining the entrance lobby on one side was the principal staircase within the tower, the plan of which is trefoil-shaped, next the street. On the side is a special staircase to what was intended as the billiard-room and its appurtenances. The billiard-room is of an oval form, and capable of holding three tables with bays on either side for spectators. Underneath this apartment, on the ground floor, is one which was intended as the bar, and whence the approaches to nearly all parts of the building could be commanded. The intermediate floor was required to be of great strength, so as to obviate all danger of vibration to the billiard-tables; to accomplish this purpose, being indisposed to use girders, I designed a special system of flooring, in which, although the span is 25 feet, no piece of timber deeper than 9 inches was used. The joists,

9 by 3, were strengthened by struts underneath, disposed in such a manner as to carry a cradling for boarding ceilings, with moulded ribs, which were, in fact, shallow vaultings in woodwork, and possessed of very great bearing power. This same method of flooring I afterwards used for several of the other large rooms in this building, as well as in a mansion at Abermaide, near Aberystwith.

For the large saloon, about 80 feet long, intended as a drawing-room, and a smaller adjoining one in this north wing, I adopted trefoiled shapes for the plans of the bays next the sea, and utilised an irregular piece of ground on one side of the former for a series of vaulted recesses, separated from the room by a stone arcade with marble columns, and at the end of the room is a segmental apse with a range of traceried circular windows in stone, to be filled with ornamental glass.

Some of the details of this northern wing, with a perspective view showing the manner in which it should be finished at the north end facing the town parade, are to be illustrated. This design has been prepared at the request of the committee of the University College of Wales, who now are the proprietors of the building, and are hoping to complete it.

At the mansion of Abermaide, which I built shortly after this college, I adopted generally the same character of detail, and in particular I may call attention to the entrance porch, the lintels of which, of considerable span, are of Douling stone carried on columns, the shafts of which are of polished Shap granite.

Very recently I was requested by the directors of the North and South Wales Bank to erect for them a bank at Birkenhead, in which I was specially requested to use the same general style and character of detail as that I had employed on this college and at Aberystwith, and it was carried out accordingly.

Somewhat similar also, but with round instead of pointed arches, is the addition that I made about the same period to the mansion of Barrells Park, near Henley-in-Arden, in Warwickshire, the seat of Mr. T. H. G. Newton. This erection consists of a winter garden conservatory, filling up a court between two wings of the mansion. Its enclosing screen walls are built of Camden freestone, which has a deep yellow tint, and the supporting columns of the roofing, which is of timber and glass, and divided into square compartments, have shafts of Devonshire marbles, with richly-carved capitals. The whole of the flooring is of alternate dark bluish-grey and white marble squares within the moulded stone margins of the several flower-beds.

Before, however, leaving the neighbourhood of Aberystwith, I may mention some particulars in connection with the restoration of the noble cruciform church of Llanbadern, which originally was a cathedral, and is situated about a mile from that town. This has been a work which has extended over a very considerable portion of my professional career. It has been carried out in successive portions, as the collection of the necessary funds has permitted. It commenced with the restoration of the nave and the rebuilding of the porch in the year 1868. The tower and transepts were restored in 1878, and the work to the chancel is now in progress.

The first portion was begun before the establishment of the Society for the Protection of Ancient Buildings, which at the second stage in the proceeding, though they did not honour me with any notice of their intention, sent a protest to the committee against the further prosecution of the work. Other antiquaries, however, of equal zeal and ability and greater courtesy, had at the very commencement interested themselves on behalf of the venerable fabric, in particular the Rev. Mr. Petit, to whom Llanbadern church had always been dear, and who has given one of his characteristic sketches of it in his work entitled "Petit's Church Architecture."

That gentleman, anxious to learn what was proposed to be done to the structure, asked Mr. F. Penrose, the architect, to confer with me on the subject on his behalf. Recognising at once the propriety of the feeling which had dictated this step and the courteous manner in which it was conducted, I addressed myself to furnish sufficient accurate particulars to enable a fair judgment to be formed. I directed measurements to be taken at distances of 10 feet apart the whole length of the church, from lines plumbed from the base, and these showed the precise amount that the thrust of the decayed roofs had pushed the walls outward. This in fact was found to be not less than 13 inches in a height of 19 feet. The consequence was that Mr. Penrose intimated to me that it was obvious that the condition of the fabric was as dangerous as I had reported it to be, and that the work proposed was necessary.

I shall not weary you with any minute description of the state in which I found the church, and my working drawings, which are to be reduced as illustrations to this paper in the journal of *The Architect*, will show what I have done to it. It will suffice to say that the walls forced out, as above described, and with perished mortar, were on the point of falling; the roofs had been much lowered, or else later debased ones had been substituted for the original; the ceiling came down below the points of the crux arches, and a huge timber cage was hung from the tower half-way down these arches to serve as a ringing stage, and the furniture of

\* Paper read at the meeting of the Architectural Association, November 24, 1882.



the church was rotten with the damp which the roofs had failed to exclude.

The special characteristics of this church are extreme simplicity in combination with the grandeur that results from largeness of scale, each arm and the tower being 40 feet wide externally. The only place where any richness of architectural detail had been indulged in was in the southern doorway, where the jambs were in three orders, shafted with rudely-carved capitals, and the arch was richly moulded, the details being of the characteristic Early English work of the district. All the original windows had been simple narrow lancets. These were rather curiously grouped in the west end of the nave and end of the south transept as triplets, one light smaller than the others being raised much higher. Those of the eastern end had been superseded, with an advantageous effect of concentrated light in that part, by a large Perpendicular window, with a smaller one of the same style on either side of the chancel. These, which are still dilapidated—the former having its mullions and tracery of wood, and the latter being blocked up with masonry—I propose to restore and reglaze. The original levels, or in some cases slopes, of the floors were sought for, and when ascertained were replaced. The floor of the nave was to slope upwards very considerably from the western end to the tower.

In the new roofs which I had to design I adopted that character which my previous experience at Great Yarmouth had convinced me to be the best for such a span—32 feet; that is, with principals and cradling for the ceilings. The ceilings I have varied, increasing them in richness eastwards; and in that under the tower floor I have adopted wooden vaulting to support and make rigid the beams that existed before. In the same manner, in the chancel its ceiling is made to serve the same purpose for its old but rude oak roof, which it proved possible to retain. In my designs for the flooring or paving and furniture, which were all necessarily renewed, I have introduced an increasing amount of richness of detail eastward, with the view of enhancing by contrast the effect of the extreme simplicity of the architectural features of the stone structures of the church, which I have not ventured to alter in any way. I may call attention to the working drawings of the pavement under the tower as being composed of the mosaic of Mr. Rust's manufacture in combination with tiles executed by Mr. Godwin, of Lugwardine, from special designs of my own representing subjects from the Apocalypse. In the chancel of Holmer Church, near Hereford, and in some other places, I have also used this same series of tiles, but without mosaic.

All the working drawings of Llanbadern Church, both general and detail, are about to be reproduced in the illustrations of *The Architect*.

The remaining drawings that I propose to lay before you on this occasion belong to works which are now in course of progress or on the point of being commenced. Mr. Hugh Roumieu Gough is associated with me in regard to that of the important church of St. Paul's at Hammersmith, for which we are joint architects. In order to obtain the lofty proportions particularly desired by my colleague and the committee, it was necessary it should be dignified but simple, and devoid of ornate detail, as the funds at our command were strictly limited. Such being the case, we have given great study to the question of the materials, and have reason to think that we have been somewhat exceptionally fortunate in that respect. The stone for the exterior wall masonry is of red Mansfield, laid in horizontal courses, with the facework hammer-dressed. This is being supplied from Mr. Robert Lindley's well-known quarries at a price which competes favourably with that of the far colder and less pleasant-looking Kentish ragstone with which Londoners are, in our opinion, unfortunately too familiar. Then the stone for the facing of the walls internally is brown Ancaster, of a rich warm colour, but beautifully varied. This is, we think, the first time that this has been used in the metropolis, although in mediæval times it was extensively used in the churches of Lincolnshire; and indeed the quarries, which also belong to Mr. Lindley, were worked by the Romans. As regards the stonework for the dressings, we have been less fortunate; we had hoped to have had all the dressings executed in red Mansfield, but owing to the great cost of working, we have been compelled to content ourselves with Box ground stone for the exterior and Corsham Down for the interior, the blue bed of which has been selected by us generally for the aisles, in order that they may harmonise with the marble of which I am about to speak. The whole of the columns and responds, with their bases and capitals, are of a Belgian marble, known on the Continent as "Belgian granite," and much used in old Flemish churches, as well as in those of parts of France. The quarries from which we are obtaining this material are situated at Soignies, near Brussels, and are so extensive as to be practically inexhaustible. This marble can be obtained in blocks of almost any size, and the isolated columns in this church are of single stones 2 feet 2 inches in diameter and about 10 feet long. Its appearance is very similar to our Purbeck marble, though for richness and beauty of colour, in our opinion, this Belgian marble is superior. It has also the advantage of being exceedingly cheap, owing to the comparatively low rate of wages paid in Belgium. This is being used for the first time in England for this work. Mr. Gough, who has visited the quarries, will, I am sure, be happy to give you any

information regarding this excellent material, with which, I may add, it is the intention to line the inside walls of the church up to the string-course below the sills of the aisle windows. The whole of this marble that I have mentioned, with the exception of the capitals and bases of the columns, will be polished.

Before passing on to the next set of designs I would call attention to the construction of the roof as being novel in ecclesiastical architecture and different from any of those I have previously described. Iron for structural purposes has been hitherto rather the friend of the engineer than of the architect; indeed, to the latter, and I must own to myself, it has been almost held as an enemy. We should not have used it from choice in this instance, but the necessity for economy, and the desirability of avoiding all lateral thrust upon the lofty clerestory walls, and any visible ties which would have to cross under the vaulted ceiling, led us to its adoption. Mr. Gough's engineering knowledge, acquired many years ago whilst in the Government service, has, I think, well solved the difficulties of the problem, though in a different manner to that in which I have attempted to do so. Each of the latticed wrought-iron principals is, in fact, a girder, exerting no outward thrust whatever, except, of course, what may be due to wind pressure, which is felt in every roof, no matter what its construction may be. In this respect the report of Mr. Bidder, the engineer, so entirely confirms Mr. Gough's opinion as to disarm further criticism, since æsthetic considerations are, in this instance, outside the question. No portion of the ironwork of the roof will be left visible, as there will be a ceiling with groining ribs below it, which it is intended to treat with coloured decorations.

In the work of building the new church of St. Andrew at Redruth, in the county of Cornwall, I am associated as joint architect with Mr. James Hicks, of that town. I call your attention to the drawings of this structure, as it has some special features, and *The Architect* journal has undertaken to reproduce the whole of them in an unusually complete manner, as illustrations to accompany this lecture in its pages. The plan is that of a very wide nave with exceedingly narrow aisles, intended to serve as mere passages; beyond are north and south transepts and the chancel and chancel aisles. The east end of the nave is polygonal below and rectangular above. The site is on the slope of a steep hill, and thus space is obtained underneath the western portion of the church, and this is utilised for vestry accommodation and for Sunday schoolrooms. The approach from the basement storey to the church is arranged so that the choir may file upwards by two staircases around the font, and then uniting, pass in procession down the central passage of the nave to the chancel. The district of Redruth possesses many striking varieties of building stone, most of which we propose to make use of in the following manner.

In the first place, granite will be used for all the quoins of the main angles of the building and for the buttresses. The chief element of expense in its use is that of the labour of dressing it, and not of the material itself, for the hills surrounding the town are chiefly composed of granite of the finest quality, samples of which may be seen in the balustrading of the Thames Embankment. The cost of working mouldings, undercutting, or tracery, however, render it inadmissible for such purposes. Box ground Bath stone, from the quarries of the Messrs. Pictor, has been chosen from among the west-country oolites, in consequence of its excellent weather quality, for the finer dressings of the outside, and Corsham Down for those of the inside of the church. But Bath stone will be used as sparingly as possible, and only for the finest of the dressings. The secondary quoins and bands shown on the drawings are of a local stone of a deep-brown colour, which when used alone for large masses of walling has a very sombre effect; but it forms an excellent bordering to enclose panels of brighter and more cheerfully-coloured stones, such as white and red granite spalls, spar, Alvan, and other waste stones obtainable there at almost nominal cost.

The above stones, which are of light grey colour, will be used for plain arches. We hope thus to show in solid and picturesque construction the adaptability of the several varieties of the peculiar building stones of the immediate neighbourhood, and I am assured by Mr. Hicks that this result will be obtained at less cost than if any one particular kind of stone had been selected for use throughout, for while all those mentioned can be easily obtained in moderate quantities, no one sort can be had in sufficient amount without special quarrying.

I have now exhausted the list of what I had proposed to show you, with the exception of some drawings by Mr. George Frampton, architectural sculptor, of some incised cement work that he has recently executed for me in panels for wooden construction at Birchington-on-Sea, in the Isle of Thanet. Mr. Frampton is prepared to explain to you himself the method of their execution. They are, I think, very suggestive of what may be done to make that class of structure interesting and picturesque. The buildings consist of one-storeyed residences, which we call there bungalows, and blocks of two-storeyed stabling attached to them. A series of these designs has been carried all round the latter upon a ground-work of black cement, but those on the main buildings are upon red, the figures in both instances being left in the natural colour of the cement, tracked here and there with yellow. I had hoped to



have had some photographs of the building to show you the general effect, and have not had time to make any special drawing instead.

In conclusion I have only to apologise for the very desultory nature of these notes and for the anachronism of the designs exhibited. Of this latter I am painfully conscious, and know that in all probability they will appear very like the last dying speech and confession of a dodo, in these days of eclecticism, lacking all that piquancy which a concession to the fashionable mixture of styles would have given them. It is, however, too late for me to learn any other language of art than that I have learnt; I must be content, therefore, if from any of the fossils that I have unearthed, you have been able to glean either instruction or amusement.

### DECORATIVE ART.

THE concluding lecture in the course on "Decorative Art, Ornament, and Design," was delivered by Mr. J. H. Chamberlain in the new Lecture Hall at the Midland Institute, Birmingham. He said that in his last address he spoke of conventionalism in art, and tried to show how it was forced upon them. One reason for this conventionalism was the fact of position and distance. If a figure was taken down from one of the mediæval cathedrals it would possibly be found that the neck of the saint or the sinner, as the case might be, was developed, and the reason for this was that the object was set up at a distance of perhaps some 60 feet, 70 feet, or 80 feet high, and was only intended to be looked at from a long distance. A very important thing for consideration was the kind of conventionalism which was to be introduced when they had different kinds of treatment of the same kind of decorative object. A great deal of confusion and considerable amount of bad work was seen in the productions of the casting-furnaces, because those engaged there would, in making cast ornaments, attempt to reproduce something beyond their proper range, and forget the use of the conventional. The proper conventional was that which regulated the limits in which a designer moved, and caused him resolutely to set his face against attempting any kind of other work except by other and greater means. With regard to the question of material—and this was a much wider question than some people thought—it was no use attempting to do in stone that which could only be done in marble, and a great mistake was commonly made by persons attempting to do with small means that which could only be performed by great ones. During the past few years a great change for the better had taken place in the stained-glass windows placed in our cathedrals and churches, but the general feeling was that if the whole of the abominations of some thirty years ago seen in some cathedrals could be ground to powder, it would be a desirable end to them. All this arose not from any excess of original sin on the part of the stained-glass designers of that time, for they did the best they could with the knowledge and means in their power, but from the common mistake arising out of people confusing stained glass with painting. He had been asked hundreds of times why the figures on stained-glass windows were so absurd, and why there was not a better kind of drawing introduced, and the windows made more pictorial. The reply to this was that the stained-glass window-makers, with all their faults, were wiser than to do that, for no work in stained glass could at any time be a picture. The essential nature of a stained-glass window was that the light should come through it, and, as it were, be partly held by it for a time, giving the figures a charm and a quaint effect; but the moment the pictorial idea was introduced, the figures required to be placed, not in a straight line like soldiers, but some behind the others, and this was impossible in stained-glass windows. Another but a comparatively small matter to which he wished to direct attention was painting on china, and with reference to this he pointed out that, according to his idea, there could be nothing worse than making a picture on a plate. It could be much better made on a panel or canvas, and therefore it was a waste of time and throwing away an opportunity to paint on china. Nobody ought to be allowed to touch a piece of china who was not a master of the brush and the pencil. Many people were puzzled where to stop in finishing a design. There was not the least use in adding details so as to obscure the idea, or in putting on ornamentation so as to cover up the outlines. All that the designer required to do was to carry the finish so far as he felt it was illustrating the idea he wanted to instance. He frequently saw an idea good in itself, and of some power and grace, lost altogether in the profusion of ornamentation with which it had been overloaded. Another reason was that this carrying the finish to an excess interfered with the imagination, which was seldom aroused by anything that was perfect; imperfect art was the most imaginative. The way to design was one of the difficulties of present art, and the problem, "Can we teach design?" had never yet received a satisfactory answer. He did not think they could teach design in the way in which some people thought they could. He believed the only thing that could be done was to take a student to the great master of all, and show him what his necessities were, and where he could find food with which to supply those necessities; then show him what use meant, and the application of beauty to use;

and set him in the right path, just as a mother did when she taught her infant to walk, and sweep needless difficulties and stumbling-blocks out of his way. Mr. Chamberlain then proceeded to illustrate on a black board several easy methods of using natural forms for the purpose of design; and, continuing his remarks, said it had been assumed throughout the series of lectures that they did not doubt the good of art. It would be strange if they did, but he wanted them not to be satisfied with their own knowledge, nor to keep it to themselves. Let them, as far as they could, do a little proselytising among other people with the consciousness of what good art could do them. If the world only knew how much men might be helped and strengthened by a knowledge of art, they could show people, without fear of any sort of contradiction, that art was a revealer, a joy-giver, and a healer—that it could make them acquainted with things with regard to which they would otherwise be absolutely blind, and would open to them a world full of grace, glory, and beauty, which would otherwise be dull, barren, and sterile, and teach them to enjoy some of the truest and best delights which were open to the human breast, and which had the merit of not robbing or depriving anyone of any possession, whilst adding to one's own riches. Art, he was sure, could not only add to the joys of life, but could take away a great deal of its sorrows. A great advance had been made in art, for now, instead of it being regarded as a useless pastime, it was looked upon as a worthy occupation, and people wanted to know something about it, and esteemed those who practised it. He hoped, however, that the world would go a little further, and be prepared to make some sacrifices on account of art. At the present time people had no objection to their buildings being beautiful and decorated so long as it did not cost them any money. If it would cost them anything they at once set about seeing if they could not do without it. He wanted to see this remnant of the old heathenism swept away, and the time arrive when it would be as dishonourable for a man to say that he would as soon be without art as it was at the present day for a man to say he would as soon be without education. He thought that people who would not now make any sacrifice for the cause of art would make some, and permit it in others, if all of them could only teach them the lesson that without art life was incomplete, and shorn of its strength; that it only had a small part of the power which was possible to it; and that with art it became rich and beautiful, and made them happy, and gave them the still greater privilege of adding to the happiness and satisfaction of others.

### THE LATE MR. CHARLES HENRY MITCHELL.

THE death is announced, at his residence, Charlotte Street, Fitzroy Square, London, of Mr. Charles Henry Mitchell, a former well-known Manchester artist, and member of the Manchester Academy of Fine Arts. Since the deceased gentleman took up his residence in London, some seven years ago, says the *Manchester Guardian*, he has done little in his profession. Mr. Mitchell was the son of Mr. Thomas Mitchell, a surgeon at Birstal, near Leeds, where the artist was born about 1821. After receiving a liberal education he was articled to Mr. Chantrell, a distinguished Leeds architect. After completing his articles he came to Manchester in 1842, and entered the service of Mr. John Edgar Grogan, the well-known architect, of Princess Street. Remaining some short time with Mr. Grogan, he next practised independently as an architect, principally for the then leading firm of contractors and builders in Manchester, Messrs. Bowden, Edwards & Forster, of Brook Street. His earliest and closest acquaintances when he first came to Manchester were the late Mr. Selim Rothwell and Mr. William Percy, the portrait painter. To these two artistic and bosom friends he owed much of the inspiration which marked his subsequent professional life as an artist. In fact, it was with Mr. Percy he made, in 1844, his first sketching trip in the neighbourhood of Bolton Abbey and Bolton Woods. Among his earliest examples exhibited at the Royal Institution were three water-colour drawings at the Exhibition of 1850, one being a view of Cornelian Bay, Scarborough, and the others architectural subjects. In 1851 he showed a capital oil picture of Scarborough and a very chaste drawing of Loch Katrine. Subsequently he exhibited some excellent examples in water-colour, notably *Heysham Church*, *Derwentwater*, *Morecambe Bay* (in 1853); *Ullswater* and *Naworth Castle* (in 1856); *Rydal Park*, *Alderley Church*, and *Holford Hall* (in 1857); *Cookham Bridge*, and other views on the Thames (in 1859). At the exhibition of 1864 he exhibited a fine drawing, *The Force on the River Kent*, *Westmoreland*, in which the cattle introduced were drawn by his then talented young protégé, Mr. Basil Bradley, who subsequently assisted him in the same way in most of his landscapes. It may be further mentioned that in some of his architectural drawings, in which perhaps he showed the most artistic powers, Mr. Mitchell sought the assistance in the introduction of figures of another Manchester artist who has since become eminent, Mr. Fred. J. Shields. For some years past Mr. Mitchell's work has been absent from the autumn exhibition at the Royal Institution, partly for the reason that his health has not been robust, but chiefly doubtless because he was possessed of a fair competence, which rendered him independent of either art patrons or picture dealers. Mr. Mitchell was, with Messrs. Hammersley,



Wilson Dyer, G. W. Anthony, Robert Crozier, H. H. Hadfield, William Percy, Charles Ward, and H. Clarence Whaite, one of the executive committee of the successful local Art Exhibition held in the new wing of Peel Park Museum in 1857. In that collection he exhibited about a score of his powerful drawings, notably a very beautiful drawing of *Kenilworth Castle from the Green*, and one of *Lanercost Priory*. Upon the formation of the Manchester Academy of Fine Arts Mr. Mitchell became a member, and was, with Messrs. Hammersley, Henry Calvert, J. Lamont Brodie, John Bostock, Robert Crozier, William Hull, W. K. Keeling, and W. Percy, one of the original Council of that body. Though not taking any active interest in the Academy for some years, he retained his membership until his death. Nothing pleased him more than to give his old Manchester brothers of the brush a hearty welcome when they visited his quarters in London. Mr. Mitchell was one of the founders of a now popular institution, the Brasenose Club, of the first committee of which he was a member, and within whose walls he was wont to pass away many—very many—hours of pleasant chat and gossip.

## TECHNICAL EDUCATION IN BELGIUM.

A LETTER has been received in Bradford from Mr. Swire Smith (who is at present in Antwerp as a member of the Commission on Technical Instruction), from which the following are extracts:—

We are apt to think lightly of a country like Belgium, because on the map it seems somewhat insignificant, and has only a comparatively small population. Yet it is to the continent of Europe what Lancashire and Yorkshire are to England, and no part of Europe contains the same population for the area, or can compare with it in wealth of resources or industrial importance. In bygone times, centuries ago, the material resources of Belgium were developed side by side with the intellectual resources of the people, until the Flemings became the leading manufacturers of the world. In their struggles for political and religious freedom they were persecuted in a terrible manner, their industries were broken up and destroyed, and it is said that hundreds of thousands—the best of the people industrially and those most useful at home—were driven to seek refuge mostly in England, asking for nothing but freedom to worship and labour. They became missionaries of skilled work, settling in the small manufacturing towns, and imparting new vigour to the manufacturing industries in all directions. Their merchants infused new life into London business 300 years ago, just as, we must admit, the Germans and other foreigners have into the merchant business of Bradford and Manchester more recently.

In a great measure we have inherited an industrial supremacy established by the Flemings, and in our journeyings now we see and hear indications everywhere that the Belgians are striving to regain the supremacy that they boast England alone holds over them. A generation ago it was their custom to import English workmen to resuscitate their dormant industries, and English capital also came freely to their aid. One is not surprised to hear of long hours and low wages, for both conditions were absolutely necessary in order to render competition even possible. Having obtained a foothold, they turned their attention to education, and now, with the two factors in full operation—low-priced labour and effective schools—the best men everywhere are showing greater interest and faith in the latter than in the former.

Near to Liège we visited the gigantic iron and steel works of the Cockerill Company at Seraing, founded in 1817 by Mr. John Cockerill, a Lancashire man. In the several departments of mining, smelting, forging, and machine-making about 10,000 operatives are employed, with engines working at about 12,000 horse-power, while the wages paid amount to 400,000*l.* a year. The whole establishment is a marvel of completeness, efficiency, and labour-saving appliances. About 100 draughtsmen are employed, of whom twenty-five are Germans and Swiss from the polytechnic schools of those countries; but there are no English. There are free night schools, attended by boys and adults from the works, numbering nearly 2,000; an Industrial or Technical School, attended by about eighty fitters, boiler-makers, and the clever young men in all the departments: and a mining school, with 200 students. The director of the steel department informed us that he requires all young men under eighteen in his department to attend the night school; a monthly register is furnished to him, and he even punishes by expulsion from the works those who wilfully absent themselves without sufficient reason. Such is his faith in the industrial value of education. A similar state of things exists at the great zinc works near Liège, the *Vieille Montagne*, employing 7,500 men, and where intelligence in all the operations is so much insisted on that the apprentices are required to attend evening schools. "I am not prepared to say," remarked the director, "that attendance at the night schools makes the youths better workmen, but it trains them to habits of thought and reflection, it keeps them from worse places, and tends in all respects to make them better men." Time-breaking through drink at these establishments is almost unknown.

At the great glassworks at Val St. Lambert, which we visited, 1,800 workpeople are employed, and the same firm have other works at Namur, employing 1,200. The overwhelming proportion of the iron and steel products of Seraing, both in raw material and finished machinery, is imported. The zinc works export four-fifths of their produce, and one-fifth comes to England; the glass company export three-fourths of their manufactures, of which more than one-sixth comes to England. I am told that the national resources of Belgium for the production of these commodities are not greater than those of England. Surely those facts furnish material for reflection.

We have visited evening schools in almost every town that we have seen, and nothing has surprised us more than the large attendance of artisans, the high character of their work, and the spirit with which they are pursuing their studies under difficulties.

The town of Liège, which is not so large as Bradford, has 1,300 University students, and is about to spend 160,000*l.* on new buildings. Its out-school has long been crowded with evening students, and a new building with very superior accommodation, at a cost of over 15,000*l.*, will shortly be opened. The evening classes in the several subjects are attended by upwards of 5,000 students. Ghent is following Liège with new University buildings, and its technical school is attended by over 1,000 students, who come after their work in the evenings. Then, without including the wonderful drawing schools of Brussels, I may say that above all these institutions, in its influence upon industrial and fine art, is the Academy at Antwerp, giving the highest art instruction absolutely free to 800 students, of whom 60 are English. They tell us at this hotel that after the tourist season is over many of the hotels of the town have recently been quite full. Wool merchants and manufacturers from all parts of Europe have been attending the wool sales which have recently been held in Antwerp, and which are growing in extent and importance. Antwerp is nearer the Continental factories than London, and this fact is not lost upon the enterprising Belgians. I will not croak over these things, but we ought all to try and comprehend their meaning. The strong forces, to my thinking, are still on our side, but we cannot afford to allow them to be unused; and with this conviction I know of no higher duty than that of impressing upon the people of manufacturing England to look to their intelligence, tact, and effective labour as the most powerful weapons with which to meet our wants in every country.

## ARCHITECTURE AND MUSIC.

THE sixteenth annual meeting of the American Institute of Architects was held lately in Cincinnati. In the course of his address the President, Colonel Nichols, spoke of the relation between music and architecture:—"Some one," he said, "has entitled architecture as 'frozen music,' a figure of speech too far-fetched to be called even a poetic licence. It may be said that a point of union exists between these arts in the science of numbers, the vehicle by which both are born; but there is a yet closer alliance in the fundamental laws of symmetry—the necessity for just and harmonious proportion of all the parts. These laws cannot be violated in architecture without harm. They are often disregarded in music by composers of unquestionable genius. Wagner, Liszt, Berlioz, and a host of smaller men, indulge in frequent inconsistencies, sometimes building their temples of music upon the apex rather than upon the base; but the classical composers, such as Haydn, Mozart, and Beethoven, rarely violated the laws of symmetrical progression. With them the work of art is built out of the smallest parts, which grow in geometrical proportion up to a perfect whole. The smallest division of form in music is called a bar or measure. The symmetry of the composition of the masters of the Classical period may be made comprehensible to the eye. In the diagram before you, which has been kindly furnished me by Professor Singer, of the College of Music, is, you will find, a brief but complete example of this symmetrical construction. The smallest curves uniting two points indicate the single groups of two measures; the larger curves, groups of four; the yet larger comprise whole phrases of eight bars. The model which is here presented as an illustration of the laws of musical symmetry is a passage from Mozart's Symphony in G minor. I might easily multiply examples of exquisitely-constructed architectural forms in music. Out of Beethoven's masterly *Eroica* Symphony could be built a Gothic temple of majestic proportions, with decorations of infinite beauty, but the limits of this hour force me to resist the fascinating temptation. In the suggestions I have made for the instruction of the student of architecture the study of music has not been named, and I have no doubt Professors Ware and Ricker would hesitate before including that art in the curriculum of their schools; yet that study may be earnestly commended to the architect, the painter, and the sculptor. Of all arts it is the most ideal; more than the others it excites the imagination, refines the taste, and elevates the soul. It is one, at least, of the paths which lead to that high æsthetic plane where every true artist should aspire to stand. The true artist is not an egotist. He works not only for to-day—his creations are for the ages."



## NOTES AND COMMENTS.

It is understood that a gentleman, who is not a Roman Catholic, has offered to undertake the cost of erecting the Roman Catholic Cathedral in the Vauxhall Bridge Road. Some years ago sketch-designs were prepared for the building, but Cardinal MANNING considered that the erection of poor-schools was more urgent, and that the cathedral might be left to his successor. When the designs were drawn Gothic was in more favour than at present, and it remains to be seen whether that style will be now adopted. The reason given for so munificent a gift as a large cathedral is that the donor is an admirer of some of the great Italian churches, and desires to have his name associated with a building of the same class. Under these circumstances, it is not unlikely that the new cathedral may be in the Italian style. Unfortunately, the site for the building possesses few advantages.

NEXT week, at the Paris Chamber of Notaries, the two large strips of ground bordering on each side the new Parc du Champ-de-Mars (the site of the 1878 Exhibition) will be put up for sale in lots by public auction. The lots have been so planned as to permit the buyers to erect buildings in accordance with the plans and regulations of the City Office of Works, conformance with which will be compulsory. The new houses will thus on the one side border the Avenue de la Bourdonnaye, and on the other the Avenue de Suffren, while their façades, which, according to the plans, are to be of truly monumental character, will face the Park. The new buildings will form a link between the populous quarters of Grenelle and Gros-Caillou, at present quite separated from one another by the Champ-de-Mars.

AMONG the grants to be demanded by the Minister of Fine Arts will be one of 5,000,000 francs for the acquisition of the Hôtel de Chimay, adjacent to the Ecole des Beaux-Arts, for the enlargement of the latter. The Minister will also ask for a credit of 3,000,000 francs to purchase from the city of Paris the site of the annexe to the old Hôtel-Dieu, on which it is proposed to erect the new National School of Decorative Arts. Another grant will also be required for the purchase and demolition of the house intervening between the Boulevard des Italiens and the Opéra-Comique, so as to give the latter a frontage on the boulevard.

THE heavy rains that have prevailed of late in the French capital and throughout the valley of the Seine have swollen the river to such an extent that grave fears are entertained of serious inundations in Paris itself. The water has already risen to within  $1\frac{1}{2}$  metre of the top of the stone embankments, and as it must continue to rise for at least another week owing to the amount of water to come down from the upper reaches of the river, it is quite possible and even probable, in case the present bad weather continues, that it may overflow and lay a large part of the city under water. It seems almost impossible, but nevertheless it is believed that Parisians may see the Champs-Élysées converted into a lake. At both extremities of Paris—Bercy and Asnières—the paths and roads bordering the Seine are already flooded, and in the latter place the cellars of hundreds of houses are full of water.

THE exhibition of the plans and models in the architectural competition for the reconstruction and extension of the Sorbonne was opened on Thursday the 7th inst. in the Pavillon de la Ville, Paris, behind the Palais de l'Industrie. The competitors, upwards of thirty in number, have themselves elected the jury, who will designate in order of merit the ten plans that best fulfil the requirements of the competition. In case the architect who takes the first place should not be entrusted with the execution of his plans, he will receive a sum of 20,000 francs; while the authors of the four plans classed next will get 15,000 francs, 12,000 francs, 10,000 francs, and 8,000 francs respectively; and the remaining five 5,000 francs apiece.

HANS MAKART, the Austrian artist, is now exhibiting his five pictures, *The Five Senses*, at the Panorama de Reichsoffen, in the Rue St.-Honoré, Paris. They will remain on view until the 28th inst.

THE shop windows are now full of Christmas cards, and the varieties are so great that purchasers sometimes find it difficult to make a selection. The progress of the trade is surprising, and it represents the expenditure of much money on designs. Publishers find it necessary, in order to hold their position, to have recourse to artists of position. Mr. TUCK, for instance, has commissioned some of the members of the Royal Academy; but the results are not always successful. Messrs. EYRE & SPOTTISWOODE have produced designs by M. PRIOLO, which are reminiscent of the great Italians, and the largeness of style and academic system of colouring form a strange contrast to the namby-pambyism which is popular. It must be allowed that this year the greatest success in cards has been achieved by Messrs. HILDESHEIMER & FAULKNER, but such a result was to be expected after their liberality in dealing with artists, and from their experience. One of the novelties of the season is a series of Old English cards which have been published by Messrs. FAULKNER, of Manchester. They are in plain black and white, but the designs are beautiful; and as the verses have been taken from "Patience," there is more humour in them than is generally found on cards. They are almost the only cards of which it can be said with confidence that they have been entirely produced in this country. Most others are drawn and printed in Germany.

ON Monday last the ruins of the Palais des Tuileries, which for upwards of three centuries has been the abode of French kings, became the property of a Paris contractor. The sale, which was held in the auction-room of the Tribunal of Commerce, was attended by a numerous company, the upset price being fixed at 10,000 francs. The bidding soon became animated, a large number of contractors being evidently anxious to secure the work, with a view probably to the publicity or honour to be gained thereby, rather than the profit. The hammer finally fell to the bid of M. PICARD, who has lately demolished and removed the buildings of the 1878 Exhibition, for the sum of 33,300 francs. The clauses in the conditions of sale relative to the art or other treasures that may be found in course of the demolition are very stringent, and run as follows:—"Independently of the fragments of sculpture, which remain the property of the Fine Arts Department, the State reserves to itself the exclusive and entire property in all articles of gold or silver, moneys, bank-notes, or other securities and papers, documents (administrative or otherwise), medals and coins, statues, furniture, bronzes, strong-boxes, jewels, and every other article not originally belonging to the body of the building. This regulation applies equally to the workmen employed, and to everyone making any discovery among the ruins. The Government further reserves the right of making researches, through its own servants, in various specified portions of the building." Considering the stringency of these conditions, the price realised is far above what was generally expected. The ground must be entirely cleared within six months of the date of the site being handed over to the contractor.

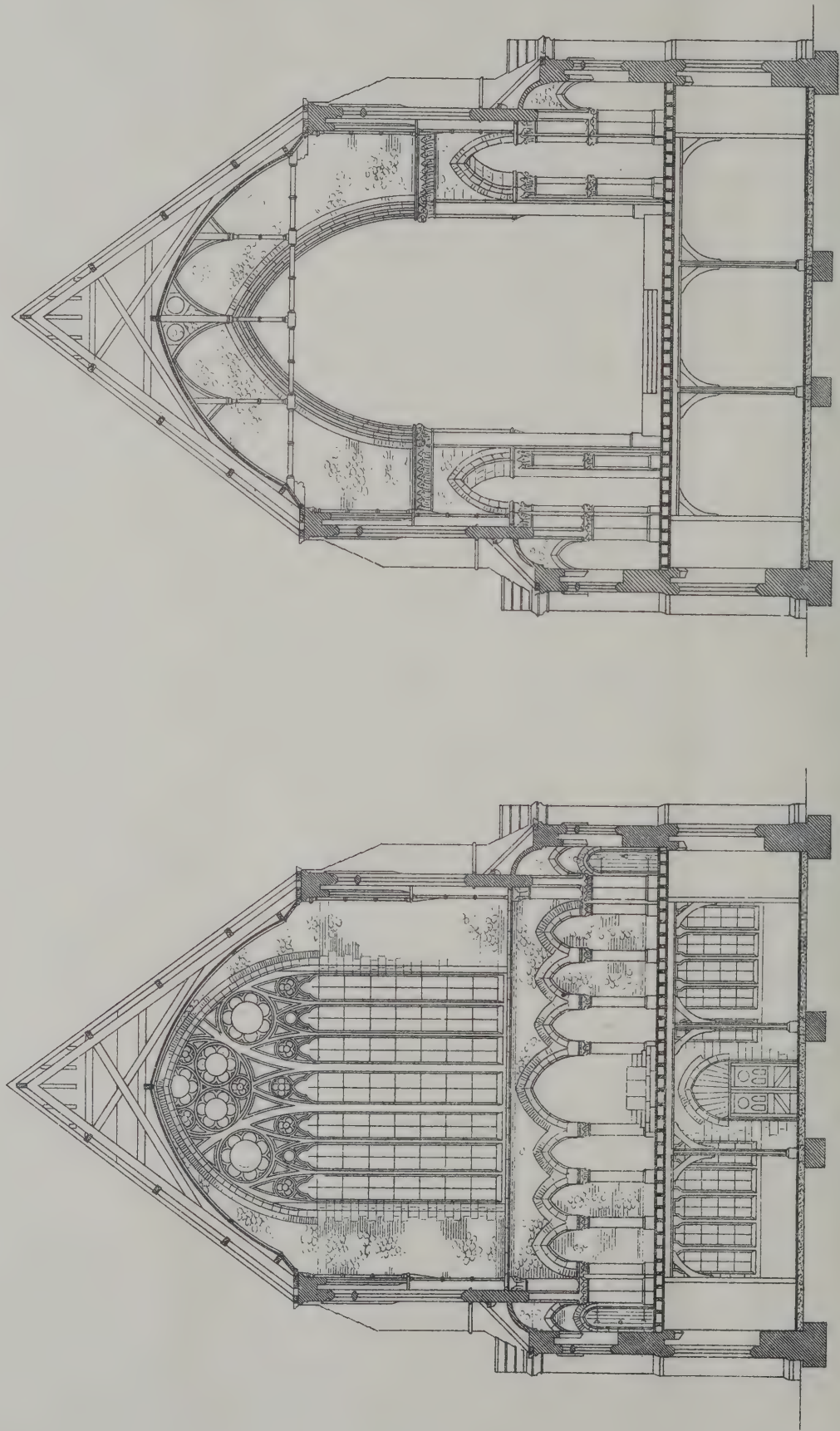
THERE was an election at the Metropolitan Board of Works on the 1st inst. of a district surveyor for the district of St. James and St. John, Clerkenwell, and part of Islington. The following were the candidates:—Mr. A. ASHBRIDGE, Mr. C. W. BROOKS, Mr. W. J. BUXTON, Mr. E. CARRITT, Mr. H. CHESTON, Mr. J. S. EDMESTON, Mr. G. ELKINGTON, Jun., Mr. J. M. FERGUSON, Mr. W. GRELLIER, Mr. J. HAMILTON, Mr. P. HUNTER, Mr. G. INSKIP, Mr. G. JACKSON, Mr. L. KARSLAKE, Mr. G. A. LEAN, Mr. W. H. LEES, Mr. H. McLACHLAN, Mr. E. MARSLAND, Mr. T. E. MUNDY, Mr. R. E. POWNALL, Mr. O. RENTON, Mr. W. H. SCRYMGOUR, Mr. L. SOLOMON, Mr. W. L. SPIERS, Mr. A. R. STENNING, Mr. W. H. STEVENS, Mr. H. W. STOCK, Mr. E. STREET, Mr. A. W. TANNER, and Mr. F. TODD. This list was reduced to six at the first voting, viz. Messrs. ASHBRIDGE, CARRITT, ELKINGTON, HUNTER, STENNING, and TANNER. Finally Mr. CARRITT was elected by eight votes over Mr. TANNER.

By Ministerial decree the Académie des Beaux-Arts has been authorised to accept the donation, lately offered by the Duchesse DE CAMBACÈRES, of an annuity of 3,000 francs, to be distributed—1,000 francs to the second Grand Prix de Rome in painting, 1,000 francs to the second Grand Prix de Rome in sculpture, and 1,000 francs to the first Grand Prix in copper-plate or medallion engraving.









Section looking East

Section looking West

Scale of 0 5 10 20 30 40 50 60 70 80 90 100 Feet

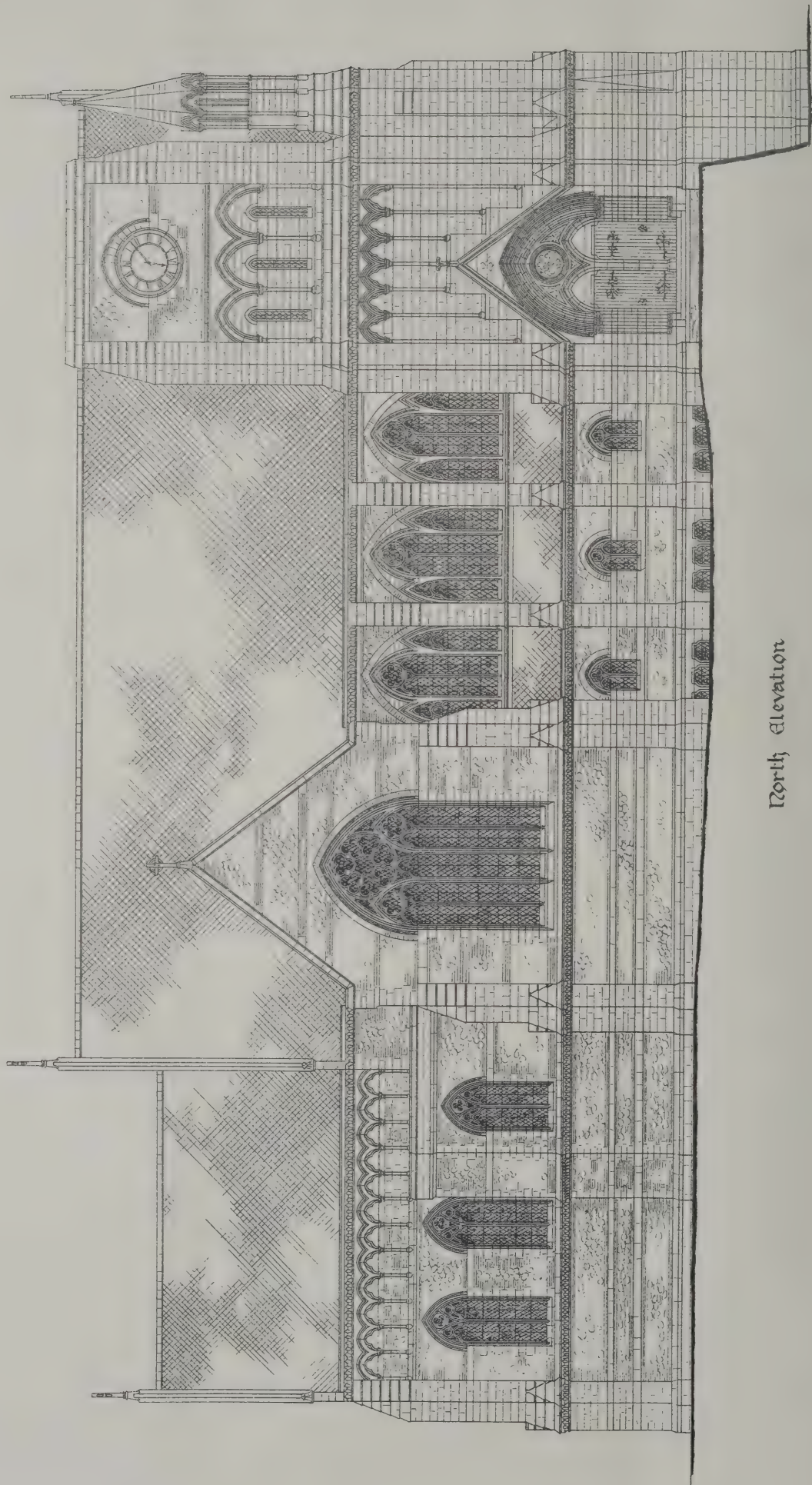
CHURCH OF ST. ANDREW, REDRUTH, CORNWALL.  
JOHN P. SEDDON & JAMES HICKS

Spangue & Co. 22, Mark Lane, Cornhill St. E.C.









North Elevation

Scale of 10 Feet. 10 20 30 40 50 60 70 80 90 100 Feet.

Designed & C<sup>d</sup> 22, Marina Lane, Cornhill, E.C.

CHURCH OF ST. ANDREW, REDRUTH, CORNWALL.

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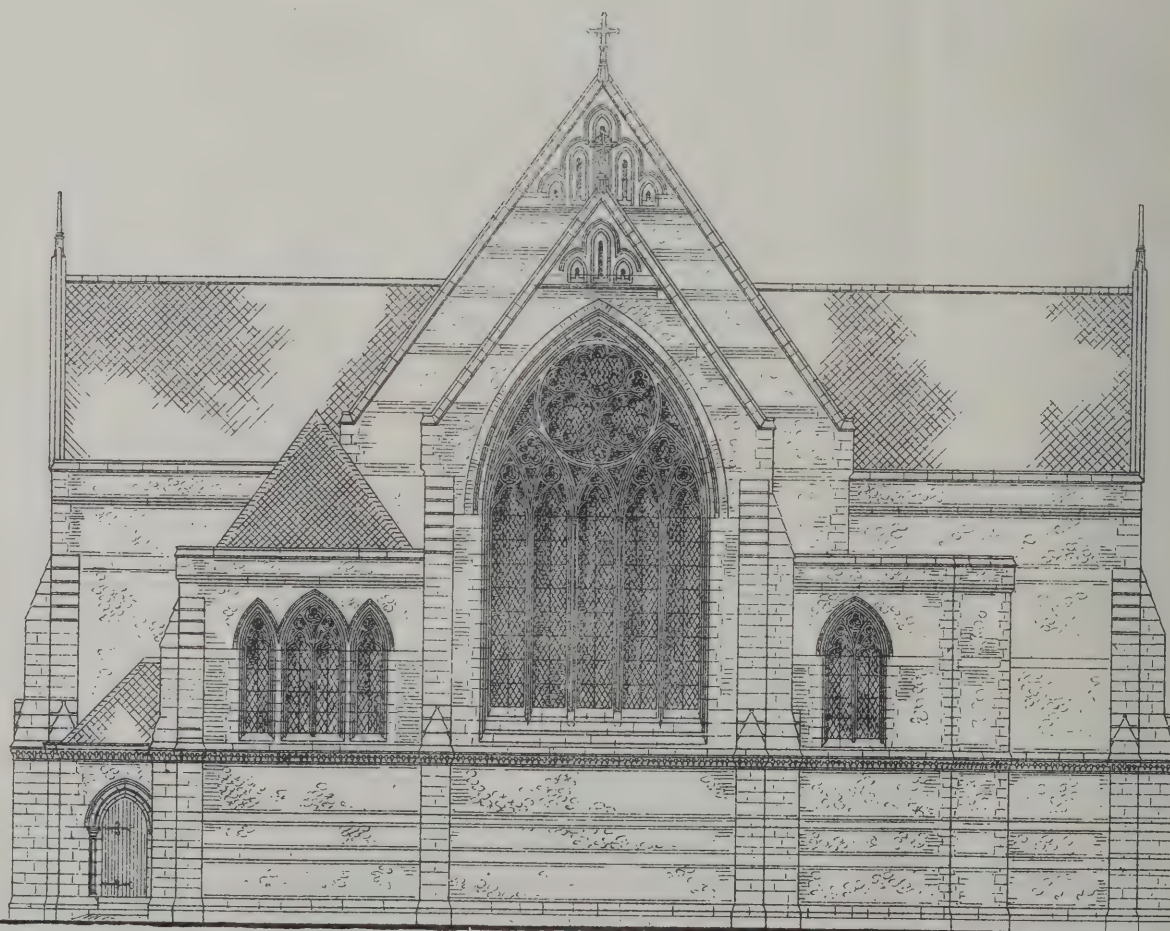




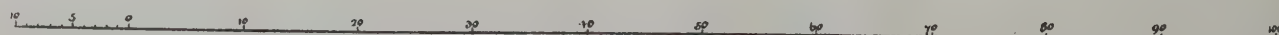


Section of Chancel

Section of Transept.



East Elevation



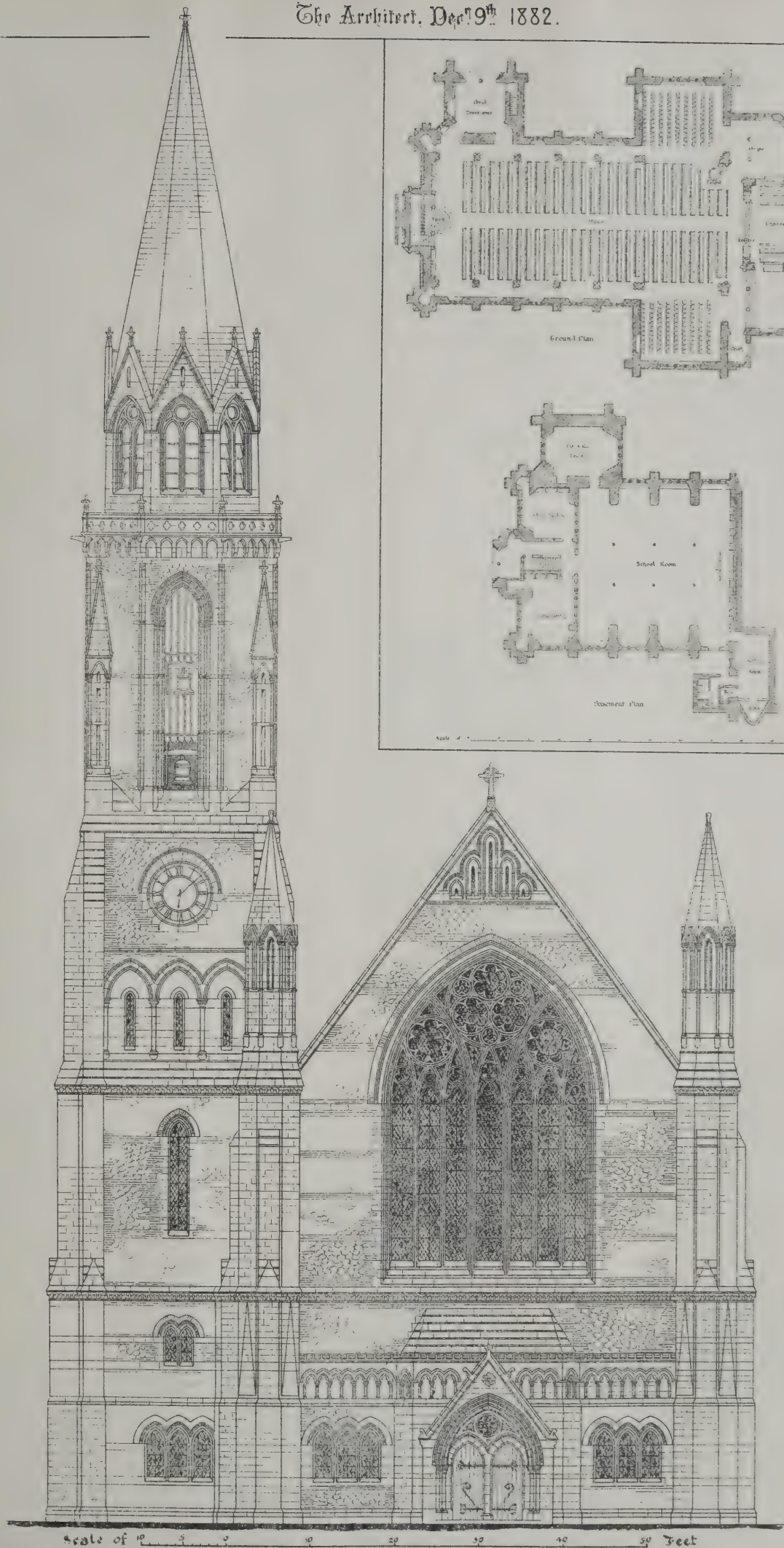
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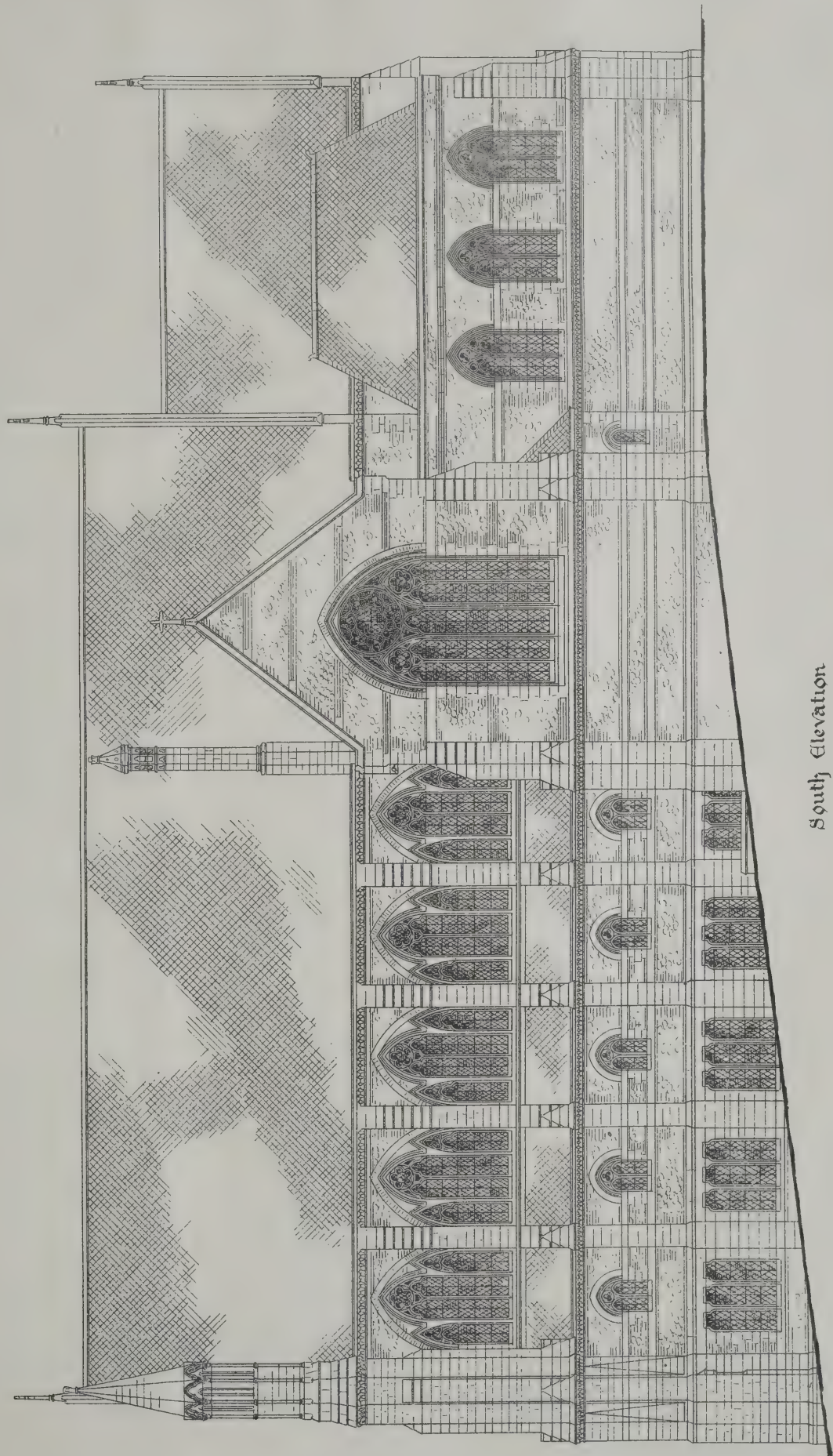
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South Elevation

Scale of 10 5 0 10 20 30 40 50 60 70 80 90 100 Feet

CHURCH OF ST. ANDREW, REDRUTH, CORNWALL.

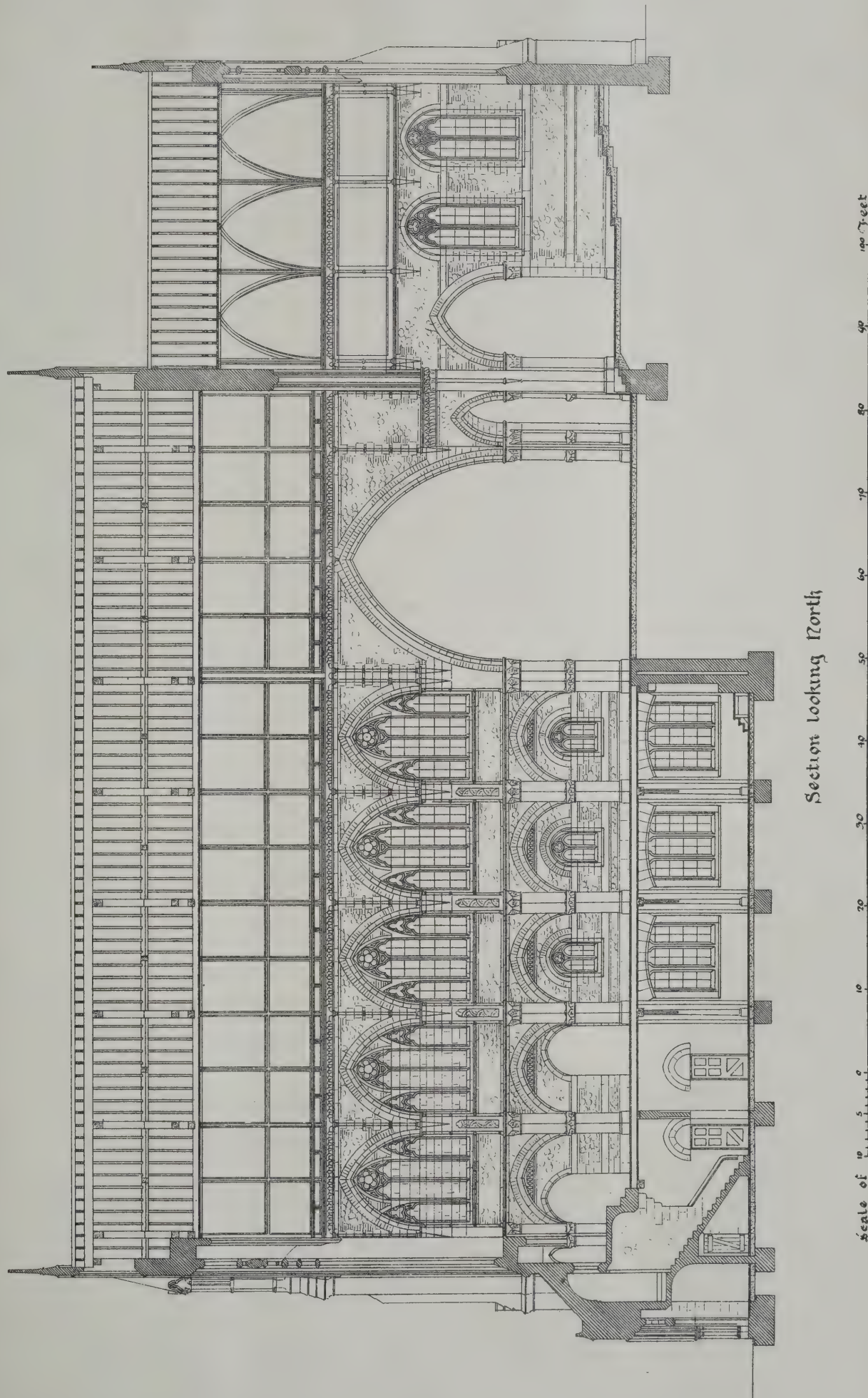
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Section looking North

CHURCH OF ST. ANDREW, REDRUTH, CORNWALL.

JOHN P. SEDDON & JAMES HICKS  
JOINT ARCHITECTS.







## ILLUSTRATIONS.

ST. ANDREW'S CHURCH, REDRUTH.

THE reproductions of the working drawings of this church, which are now published, are referred to in the paper by Mr. SEDDON on page 361.

## THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE third ordinary meeting of the session was held on Monday evening, Mr. Horace Jones, in the chair. Messrs. Stevens, Murgatroyd, and Holden were present on the part of a deputation from the Manchester Society of Architects. The President, in addressing them, said it gave them no small pleasure to have received them and heard them on a matter which was a subject for serious consideration, and they would give the subject, to the best of their ability, consideration which should also be serious, and they hoped to meet the wishes of the deputation with prudence and propriety.

Mr. E. P. Warren and Mr. Percy Hunter, it was then announced, had just passed the examination in architecture.

The Ashpitel prize had been awarded to the gentleman who passed best in the three examinations—viz. Mr. T. P. Marwick, of Edinburgh.

The silver medal offered this year by Mr. Ernest Turner, to be bestowed on the candidate who passed best in sanitary science subjects in the examinations 1882, had been awarded by the Council to Mr. Charles Stewart Smith, of Reading.

## The New Law Courts.

The PRESIDENT said he asked permission to inform the members that he had had that day the honour of attending one of the most interesting and eventful occurrences which could occur in a lifetime, one of those incidents which would be a chronological era in the history of England, and he felt it was his duty, as well as a pleasure, to bring the mention of the record before them. They would get a better description of the ceremonial at the new Courts of Justice than he could give, in the newspapers. It must have been the regret of everyone that the presiding spirit and genius who had called forth those stones, timber, and metal, and placed them in order, was not there to receive the acclamations, praise, and rewards which were his due. As it was, the ceremony was most interesting, and very pleased he was to attend, and to attend as their representative, though he had the opportunity of attending also in another capacity. Before leaving the subject they must allow him to thank them for putting him in the position to attend as representative of the Institute.

## The late Mr. Ogle.

Mr. JOHN HEBB, in allusion to obscurity which hung over the death of Mr. Ogle, a member of the Institute, which took place in the spring of 1874 in Thessaly, said that the Government had reopened the question with the view of trying to get at the facts of Mr. Ogle's death, that gentleman having been suspected to have been murdered. He asked whether the Council of the Institute would take steps to inform the Government of their satisfaction with the course adopted.

The PRESIDENT said Mr. Hebb's remark had better be entered on the minutes.

Mr. PULLAN then read a paper on

## The Decoration of St. Paul's Cathedral.

Mr. PULLAN said that the warfare which for the last twelve years had been going on as to the decoration of St. Paul's had not advanced the question at issue to a settlement. It was unwise to bring party warfare to bear on a question on which depended their reputation with future generations. He hoped, therefore, they might approach the question in an unsectarian spirit, and he should be sorry that anything he said should offend any of the gentlemen who had the matter in their hands. The matter was in the hands of a sub-committee appointed by an executive committee, and decision in the question rested with the Dean and Chapter of St. Paul's. The public, who in the last instance would be judges in the case, ought to be informed as to the progress of affairs. Who, then, amongst the public were qualified to judge? Clearly not the uninstructed. What, again, was duly-qualified public opinion? Certainly not opinion that objected to any representation of figures on walls, nor opinion which objected to symbolical representations, such as angels, winged lions, &c., because such representations did not correspond with any system of anatomy with which they were acquainted. Nor was it public opinion as held by the multitude, who would be led by any critic, however incapable he might be, provided he shouted sufficiently loud. Duly-qualified opinion must be that of men of taste. There were two degrees of taste—the taste which was natural to some men, and which enabled them to observe the beauties of form and colour; there was also acquired taste, which enabled men to see the beauty and fitness of things. A combination of these two formed a man of perfect taste. If St. Paul's were decorated in the manner of the Alhambra, it would be

admired; the man of educated taste, however, would reject the whole as incongruous. This being the case, where would they find a body of cultivated men who could discern beauty of form and colour, fitness of purpose, position, or, except it were those who were accustomed to have pencil in hand, designing decorative and architectural works, who by study and observation had cultivated their taste so as to enable them to judge in matters of this kind—where, except among gentlemen such as composed the Institute of Architects, would be found the tribunal to decide on what would be one of the greatest works of the British architect? The Institute being therefore the proper representatives of public opinion, he would endeavour to put before them the facts of the case. He received great courtesy and kindness from those who formed the actual representative body when he brought a rival scheme before them. A rival scheme it was never intended to be, but was rather meant as suggestions which might be embodied in the Committee's scheme and which related to the framing of the pictures, which he thought was better than that devised by Stevens. The members of the Committee answered him, however, with a *Non possumus*. Therefore it might be called a rival design. They received the design with the greatest courtesy, and if he criticised some of their proceedings it was not as individuals but as a collective body. He feared, however, that committees usually arrived at decisions adverse to art, and Mr. Pullan, as an instance of this, adverted to decisions on some notable competitions. Wren, the great architect of the national Basilica, was not exempted from the worry of a committee, for Mr. Longman in his work on St. Paul's said, "there was nothing, however small, as to which they did not set up their opinion in opposition to his; there was nothing, however important, which they did not wrest out of his hands." After narrating the history of the decoration project, Mr. Pullan said that, having repudiated architects, the Committee sought for a design from other sources, and at last unearthed a model on which Stevens, a sculptor lately deceased, had left some rough indication of his notion about the decoration of the dome of St. Paul's. The discovery of this model at that critical juncture was most opportune for them. It was a tower of defence for them against their foes. And they further strengthened their position by forming an alliance with the two greatest English painters of our day, Sir Frederick Leighton and Mr. Poynter. With both of these eminent men they made a formal agreement, stipulating that Stevens' designs should be taken as a basis; that a full-sized coloured cartoon should be placed *in situ*, one portion of which was to follow literally or with some modification Stevens' design, the other portion being of a more conventional or architectural form; but in any case Stevens' arrangement to be worked out and the frame to be filled with pictures, the subjects of which to be taken from those suggested by Mr. Oldfield in a second letter to the Dean—namely, scenes from the Apocalypse. The Dean and Chapter sanctioned the experiment, reserving to themselves full power of discussing the matter and also of rejecting the cartoons if they should be unsatisfactory. Now what, asked Mr. Pullan, was Stevens' model? A half-dome, on which were sketched roughly Titans, Telamones, angels, and squatting figures, arranged to form something like ribs, with circular medallions on a plain gold ground to receive the cartoons. The design was without any architectural character, the dream of a man who had Michael Angelo on the brain, and who was thought a man of the greatest genius because he had executed a monument full of fine details, to be placed in a position where they could never be properly seen. This was the Wellington monument—a canopied tomb adorned with groups of figures so placed that little beyond the soles of their feet could be visible to the spectator. This tomb was to have been crowned with an equestrian statue of the great captain whom it commemorated, placed in such a lofty position that his nodding plumes would almost have swept the ceiling of the Consistory Court. This figure, however, the artist was compelled by public opinion to omit. The result was the leaving out of the crown of the design, which was thus made to finish in a plain table top. Neither in the Wellington monument nor in the model for the dome did we recognise that perception of the fitness of things which was wont to characterise the man of the highest genius. Sir F. Leighton and Mr. Poynter, Mr. Pullan contended, ought never to have been pledged to adapt their pictures to Stevens' crude frame-work, which, with whatever proposed modifications, would always remain unworthy of the productions of their pencils. The prescribed selection from the Apocalypse of the figures to fill the upper and lower circles was no less severely and sarcastically criticised. It was objected that a more mystical subject, one less fitted for popular instruction or less likely to inspire devotion, could not have been chosen than that whose study had been said either to find or leave a man mad. Unless it had been meant to divert people's minds at sermon time, to occupy their thoughts with paradox instead of orthodoxy, one was at a loss to conceive how Mr. Oldfield came to pitch upon such a subject. Mr. Pullan in conclusion described the design which had been prepared in Florence by the late Mr. Heath Wilson and himself, the subject being the "Te Deum." A large painting of the design was exhibited.

Mr. PENROSE, having risen in response to the President's request, said that Mr. Pullan had invited them to an academical



discussion on a style of treatment for a large domical church, and he considered the subject to be one most interesting for discussion. But if it were to be a discussion of a rival scheme of treatment, it was decidedly premature, as the Institute had not before it the materials and details necessary for its discussion. Only a part of the scheme had been seen at all, and that merely a partial indication of one phase of the decoration, while there was much more yet to come from Stevens' design, which was not now before them. There were three committees, viz. the executive committee, the sub-committee, and thirdly, the Dean and Chapter of St. Paul's, who were quite unprejudiced, and not in any way committed to anything the committee or sub-committee might recommend. Therefore it was altogether premature to consider the merits of one scheme against another as a question of carrying one or the other into effect. He did not think Mr. Pullan had been just in regard to Stevens. Having said these few words, however, before sitting down, he would ask the Institute as a body not to commit itself to any opinion on the subject.

Mr. STANNUS, observing that he had been a pupil of Stevens, said he had been commissioned by the sub-committee to prepare, in conjunction with Mr. Poynter and subject to the approval of the committee, a full-sized cartoon. He went to France and Italy, and spent October, November, and December 1878 in studying all the good dome treatments he could find, to fit himself still more for his work. When in Rome, towards the end of his journey, he made a modification of Stevens' design, which he brought back and worked out on the scale model. The design was submitted to the sub-committee, but Mr. Poynter was not ready with his version of Stevens' design, and consequently it was kept in abeyance till this year, when he (Mr. Stannus) was commissioned to prepare an experimental full-sized cartoon, to be fixed in the cupola simultaneously with the other. Thus, in the two designs, there would be the painter's interpretation of Stevens by Mr. Poynter, and an architect's—namely, his own—which was really only the combination of the characteristic portions of Stevens' design and of the rib treatment suggested by Mr. Penrose some years ago. Mr. Pullan had found fault with the sub-committee for repudiating architects; but surely Mr. Pullan would recognise Mr. Penrose as an architect. Mr. Pullan had left out the important part of the quotation in which the sub-committee said they would require professional assistance. Mr. Stannus did not consider Mr. Pullan had treated Stevens at all fairly. Stevens was pre-eminently an artist, and yet Mr. Pullan spoke of him as a lately-deceased sculptor, implying that he was not fitted to decorate St. Paul's. Neither sculptor solely, nor painter, nor architect, nor ornamentist, Stevens possessed the balanced mastery over all that made an artist. Of all Englishmen, living or dead, he was just the man fitted to design the work. Mr. Pullan further said that neither in the Wellington Monument nor in the model for the dome did he recognise that perception of the fitness of things which was wont to characterise the men of the highest genius. Mr. Stannus quite believed that Mr. Pullan did not, and his criticisms showed that he could not. Mr. Poynter, in a letter published last July, said, "I have never kept out of sight either the design or my immense admiration for it and for the magnificent genius who produced it;" but Mr. Pullan spoke of "rough indications of his notion," and said Stevens' "crude framework" will always be "unworthy of the production of their pencils," meaning Sir F. Leighton and Mr. Poynter. It was seen from the quotation and the manner in which two eminent artists were content to work out Stevens' design what they thought. Was Mr. Pullan prepared to say the framework in the design exhibited by him at the Egyptian Hall was worthy? Mr. Stannus exhibited a sketch on the blackboard, and said it would have been decorous on the part of Mr. Pullan to have shown them a sketch at least of Stevens' design. An unflinching test of the architectural fitness of superadded work was whether it fitted on to what already existed. Considering Stevens' design in this connection, there was a peristyle below the cupola, consisting of thirty-two pilasters, spaced equally, with voids at the axial points; there were windows between the pilasters arranged in eight groups of threes, each group being axial with the eight arches of the dome, and between these eight groups of windows the other interpilaster spaces were occupied with niches. Mr. Stannus showed how he had arranged an attic balustrade proportioned to the supporting order, how the balustrade was broken over the pilasters, and how this expedient tied the design together and fitted the superadded to the existing work. The adaptation of the circular frames, which Mr. Pullan improperly termed medallions, was also a distinct invention of Stevens. Every section of a sphere was a circle, a fact taken advantage of by Stevens. These large circular panels were the most characteristic feature of Stevens' design. They gave opportunity for storiated panels without lines, which sag in the centre as all rectilinear panels on a concave surface must. It had been objected that they would form ellipses, owing to the perspective; but this distortion, through foreshortening, happened to all visible objects, and the eye was accustomed to allow for it. Another advantage of the arrangement of the circles was that they made a pattern all over the dome, and gave a marvellous unity which did not exist in any other treatment, and was another proof of Stevens' subtle feeling that the cupola was a roof which covered, and not a ribbed

transparency to be looked through. Mr. Stannus then referred to the gradual unfolding of the cupola to sight, to anyone entering the western door, as one of the data of the problem which Stevens' design satisfied. He was not concerned to defend the ribs in which the Telamones occurred, which Mr. Pullan had criticised, the design being merely a sketch.

Mr. C. HENFREY said that if he was to make any remarks it would only be to express his disappointment, as a subscriber, at the manner in which the committee had devoted the whole of their attention to the decoration of the dome of St. Paul's. He would wish to see St. Paul's a beautiful building like St. Peter's at Rome. Would any one on entering St. Peter's walk right up the building without stopping and turn his head at right angles with his body to look at the dome? Why should not the Committee give their attention to the nave and aisles, which could be decorated at a comparatively small expense? 40,000*l.* spent in mosaics for the dome would be thrown away as no one could see them, and he defied any one to tell whether the decoration was in polychrome or in monochrome.

Mr. EWAN CHRISTIAN said he did not believe, from what he had seen of St. Paul's—and he had seen it often enough to know it and to learn to admire it—that Wren, if he were now alive and had seen the attempts at polychromatic decoration, would ever have wished to put a bit of colour on the stonework of the building he so ably designed. Wren had used plaster upon the brickwork, all the rest was of stone construction, and where Wren used stone he believed that he meant stone to remain. The objection to Mr. Burges' scheme for the use of marble was that Wren had shown in his original design where he had intended to use marble; for instance, in the entrances, &c. It would be monstrous if Wren's grand design were taken in hand and destroyed, as he believed it would be destroyed, by the general introduction of colour. No doubt it could be done cheaply—he was mistaken, it could not be done cheaply, for it cost between 6,000*l.* and 7,000*l.* simply to clean the walls of the building. He would express no opinion on the designs before them further than to say that he thought the sketch on the blackboard suggested the right treatment.

Mr. ARMITAGE, R.A., observing that it was quite premature to pronounce an opinion on the comparative merits of the designs, said that if he was not in love with Stevens' design, he was still less so with Mr. Pullan's. He agreed with Mr. Christian's views as regarded colour, and considered that the dome required no decoration, as it would be lost in gloom. Figures would require to be of enormous size, or such decoration would be thrown away. He would rather, as a painter, see the decoration applied to portions nearer the eye, in the shape of a frieze below, with a simple dome or canopy indicated above, though architecturally perhaps it would not be proper. As regarded choice of a subject for the dome it mattered little whether the subject were taken from the Apocalypse or the Te Deum. Whatever the story, it could not be told, for it would be simply a succession of riddles. He held his colleagues, Sir F. Leighton and Mr. Poynter, in high esteem, and had no doubt they would do their share of the work well; but before expressing an opinion he would like to see what they had done and what they proposed doing.

Mr. J. P. SEDDON said he admired the dome of St. Paul's as it was, and he could not conceive how it could be better. Quite as much of the dome was to be seen as was necessary, and he thought it looked very beautiful when dimly seen through the hazy atmosphere. He would like experiments to be made first on portions nearer the eye—not on the stonework, but on some of the shallower domes of the chancel, which seemed to lend themselves and appeal for decoration.

Mr. RALPH NEVILL, F.S.A., said that the mosaics of St. Mark's at Venice had been spoken of as rude work. He had studied these mosaics, and he thought it was the general conclusion of everyone that they were the mosaics that were to be taken as examples of what to aim at, and the later mosaics and the mosaics in St. Peter's as examples of what to avoid. Blue and white figures never looked well perched up above one. No doubt Stevens' scheme could be carried out with success if not loaded with heavy colours. He considered what was required was a broad treatment, so that the eye should be caught by nothing, which was the essential principle in the treatment of a dome.

The PRESIDENT, in putting the vote of thanks to Mr. Pullan to the meeting, said that after all they had heard they would be agreed as to the wisdom of waiting before pronouncing an opinion, but he was sure that in waiting their desire to see what eventually would be done would be much greater than if Mr. Pullan had not brought the question before them.

Mr. PULLAN in reply, said that Mr. Penrose had said that the discussion was premature. It was three years since the design was made, and when he brought it to England he was told that the design of the Committee would be ready in a year. He waited a year, and there was no sign of it; he waited another year, and then began to get a little impatient to see the other design, and what it was like; his design, it must be remembered, was merely intended as suggestive. He had subsequently seen the Stevens model, and notwithstanding all Mr. Stannus had said in explanation of the circular panels, it still struck him that the ribs were the principal things, and he still persisted in the opinion that the ribs were any-



thing but architectural or suitable for a building like St. Paul's. With regard to the Wellington Monument he had no fault to find with Stevens; the fault was the absurdity, which Stevens himself would have seen, of cramming a monument of such dimensions into the inadequate space allowed for it.

## THE MOSAICS OF RAVENNA.\*

By PROFESSOR J. BALDWIN BROWN.

(Concluded from page 345.)

**B**EGINNING with the Catholic Baptistry, I will describe shortly some of the principal Mosaics of Ravenna, of many of which there are photographs.

The baptistry is a small building of octagonal form, covered by a hemispherical dome constructed ingeniously after the fashion of the period, with earthen vessels inserted into each other, and holding together like a pile of garden pots. The wall spaces are effectively divided by two rows of round arched blind arcades, the upper of which enclose eight windows, and were covered from the summit of the cupola to the floor with decoration in mosaic in stucco, and in coloured marbles. The last have almost disappeared, but the two former remain. The floor, the level of which has been considerably raised in process of time, contains in the centre the ancient marble font. Directly above this, in the centre of the dome, is a mosaic picture of the appropriate subject, the Baptism of Christ. The undraped figure of Christ stands up to the hips in the transparent waters of the Jordan. For the first time in Christian painting he is represented bearded, and his long hair falls on to his shoulders. The Baptist stands on the bank, with one foot raised on a stone and with his body draped only in a skin; he holds in his left hand a cross and with his right empties a cup of water upon the head of Christ. On the other side of the principal figure we see the river-god Jordan, breast high out of the water, holding in his hands a cloth, and looking up to Christ with an expression of adoration. A dove descends from the dark gold ground of the sky.

This is of all the Ravenna mosaics the most pictorial, and shows the artist triumphing over the greatest difficulties of his technical process. The nude is well rendered, especially in the figure of John, and not only in drawing but in colour. Nothing surprises one so much, in coming in contact for the first time with mosaic work of this kind, as the facility with which the artist models his forms and faces with his intractable material. The warm transparent shadows and the fine variety of the greys in the flesh tints are most painterlike. The high lights are not white, but light reddish yellow; the outlines are pleasantly rounded; the details of the features carefully rendered with small cubes chosen or cut exactly to fit their places. The colour of the water is a milky white, which sets off admirably the bronzed weather-stained form of the river-god, with his dark grey matted hair and streaming beard, and his expressive upturned eye. The antique may claim the credit of the good rendering of the nude, and has also furnished the river-god, while the excellent composition, surpassed by no representation of the subject in religious art, and the quiet dignity of the whole scene, are the artist's own.

Round this central medallion there is another circle tenanted by figures of the Twelve Apostles, who are marching round to a point under the feet of Christ in order to lay at his feet the crowns which they hold in their hands. There we have examples of those monumental figures of Christian heroes which have been spoken of as being the favourite subjects in this style of art. They are all very much alike in form, drapery, and action, and are dressed alternately in white tunic with gold-coloured mantle and gold tunic with white over-drapery; but there is considerable contrast in the faces, which are firmly designed with excellent portraiture character. Classical beauty has, however, departed from these as from similar representations of the time; and the theory has even been broached, that, owing to mixture of races and other causes, there had come about an actual degeneration in the beauty of the human countenance. Peter and Paul, with the distinctly-marked physiognomies which can be traced back to so early a date that there is some likelihood that they are based on actual portraits, head the two companies of six who meet beneath the feet of Christ. The others, all with their names inscribed in Latin characters, follow in order. It is interesting to see how the artist has arranged his design in the space he had to fill, which is in shape like a wheel, with the figures of the Apostles for the spokes of it, and the medallion with the Baptism for the nave. He has first divided his figures by conventionalised plants, which rise from the dark grass-green ground with spreading leaves, while above they go off into slender stems. Then he has given a striding action to the figures, and allowed their mantles to flutter out at the bottom behind them, while it falls in front from their outstretched arms. In this way a pyramidal shape is given to them which is still further marked by the excessive smallness of the heads, a characteristic feature of Byzantine art. A difficulty occurred when the two lines of six

came together at the back at the starting-point. It would have been awkward to show two figures turned back to back, and still more so to mark a division by an ornament where none was required by the subject. The designer has managed the point with admirable tact. We see that the three figures on each side who follow Peter and Paul respectively are shown as striding forwards in the way described, though with differences in their actions, but that the four who remain out of the twelve are arranged as follows:—Behind the striding figures on each side come two who are not moving in either direction, but stand facing the spectator with their crowns held in front of them. Then the last pair are seen to be gently moving apart in positions just between that of striding to each side and standing motionless in front view; one of them is even represented as looking back in order to reduce to a minimum the sense of a division or separation. In this way the eye is made to follow round the circle from Peter back to Paul without any sudden break or change of direction in the figures being at all noticeable. This piece of good judgment is one well worth noting. It may be compared with the arrangement of the Pan-Athenaic frieze on the Parthenon, where a similar division has to be made, and where the designer has made it occur at a corner instead of in the middle of a side. The background of the Apostles is a bright, clear blue, which occurs again but seldom in the Ravenna mosaics.

Below the Apostles comes another circle containing very curious designs, which seem to represent views of the section of a basilica of the time, in which we see the three aisles with their columns and their roofs, the altar, the thrones of the bishop and the emperor, with other objects which it would take too long to describe, but which are interesting to those who care to see an original contemporary picture of a fifth-century church. These architectural designs, which are separated by well-designed acanthus ornaments, complete the decoration of the cupola. In the upper row of arcades occur those decorations in stucco to which reference has been made. These, though of great archæological interest, do not come within our present subject, so we will pass to the lower row, on the arches of which mosaics again occur. The decoration here consists of single figures placed between the arches above the capitals of the columns from which they spring, and in graceful foliage ornament on a dark blue ground. The designer has got over the difficulty of starting his foliage by making it spring up out of a vase placed just above the capital of the column, from which it spreads itself on each side of the standing figure and terminates over the top of the arch in elaborate volutes.

The walls below the arches were once encrusted with coloured marbles which have now perished.

Let us now glance at the second of the monuments which illustrate this earliest period of the mosaics, the mausoleum of Galla Placidia. This is a small chapel, built so as to resemble a subterranean crypt. It has the form of a Latin cross, of which the arms are covered with tunnel vaulting, while the middle space is built up above the roofs of these, and is finally crowned by a cupola. The dimensions are only 46 feet in length by 39 for the length of the transepts. The interior is dark, and the massive walls give the impression of a solemn chamber of death. The adornment is, however, cheerful and of the most sumptuous kind. The floor is paved with costly marbles in geometrical patterns, and the walls to the height of the shoulder had originally the same decoration, which has now disappeared. The whole surface of the interior, besides, is clothed with mosaics, which vie with, if they do not surpass in excellence, those of the Catholic Baptistry. The ground is everywhere of a deep indigo blue, which is relieved on the vaulting by golden rosettes, and on the cupola by multitudes of stars. Bands of ornament, of the most surprising richness in design and colour, follow the architectural lines of the vaulting. Conspicuous among these are some compact wreaths of fruit and flowers, in which no pains have been spared to reproduce the most intense hues of the pomegranate and other fruits; while the taste of the artist, aided by an immense assortment of greens of every hue, has known how to keep the whole in perfect harmony. It will be noted that the wreaths spring from vases and baskets, which gives them at once the *raison d'être* which the mosaic-worker of the best time was careful to obtain for his decorative forms. Borders of scroll-work are also much favoured, and here we cannot but admire the patience and skill of the designer, who has drawn and coloured with absolute accuracy these twisted scrolls. Not only are the lines correct, but the shading and the colours, even down to the reflected lights, which can be seen in their proper places on the edges of the rounds as they turn over.

At the summit of the dome we see a golden cross surrounded by the familiar symbols of the Evangelists. Standing figures of the Apostles occupy places below, and the decoration of the central space is completed by the well-known classical device of the doves perched on the edge of a vase of water, which had become the Christian symbol of the soul drinking from the living fountain.

The most important mosaics in the chapel are, however, those at the two extremities of the nave. In the lunette over the door of entrance we have the finest single picture in the whole cycle of the Ravenna mosaics. The subject represented is one familiar in the art of the catacombs, *The Good Shepherd in the midst of his Flock*, symbolising Christ and his care for his Church. The treat-

\* Paper read at a meeting of the Edinburgh Architectural Association on November 22, 1882.



ment is, however, of another kind. In the catacombs the figure is that of a simple shepherd of the day, standing clad in the short tunic and the leg bandages of the common folk; a lamb was commonly borne upon his shoulders, and the shepherd's crook or the pastoral pipe completed his attire. Here, on the contrary, we have a monumental figure of classical dignity and beauty, in golden tunic and cloak of purple, seated in a green meadow with his sheep about him. A golden nimbus round his head and a cross of gold in his left hand stamp him at once as something different from the earlier time. The action of the left arm upon the cross, the pose of the head, have something lordly about them; while in the gesture with which the right hand is brought across the body to caress the sheep by his knee, as well as in the position of the feet, we see the deliberate choice of a pose for artistic effect by a designer who thoroughly understood the human form.

Early Christian sentiment has given here the subject, but Byzantine art feeling has taken it up into the region of the imposing and the grand. It has been well said that this composition is the most perfect achievement in the range of early Christian painting. The splendour of the colours joined with the elevation of the design gives at once the impression of a visionary appearance, while at the same time the character of an idyllic scene is not broken with.

A curious picture faces this upon the opposite wall. In a lunette of a similar size, broken into, however, by a window, we see in the midst on the ground an iron frame like a gridiron, under which flames are fiercely playing. To the left of this stands a cupboard or case, with three books in it marked by inscribed letters, as the Gospels of Luke, Matthew, and John. To the right hand of it we see a draped male figure striding forwards with vigorous action towards the fire, with an open book in his left hand, and in his right a cross. This last, and the nimbus round his head, seem to suggest that the figure is that of Christ, and he has been supposed to have in his hand the writings of some heretic that he is about to cast into the flames. A recent writer has, however, urged that we have here a figure of St. Laurence, the famous martyr, who is marching to his death as to a triumph, armed with a book of the Scriptures. If this be accepted, we have an interesting instance of the spirit in which such a subject is dealt with by the artists of this time. The humiliation and suffering are not thought of, and we only see an heroic figure sweeping on to assured victory. In any case, however, whatever be the interpretation, the figure itself remains to us, and we have in it one of the finest in the art of this period. The swing of the movement seems irresistible. The countenance is stern in its resolution, the drapery simply cast and showing well the action of the limbs, while the fluttering end adds to the impression of movement.

Glancing now again at these two sets of mosaics, we are struck by their pictorial merit in drawing, colour, and composition. The flesh tones especially are to be commended for their variety and fine gradations from high light to local colour, and then through greys to warm-tinted shadows. The actions are well studied, and the arrangement of the work well thought out. There is no blundering or patchwork. The artist has his problem clearly before his mind, and solves it by the most direct method. The actual colours employed are rich and varied; the dark blue of the grounds very deep and forcible and throwing up finely the red, orange, yellow, russet, and grey of the flesh tints, as well as the darkly-gleaming gold of the nimbi and accessories. The draperies are often white, but purple and gold also occur. The greens of the foliage and the jewel-like brilliancy of the flowers and fruits are pleasing in themselves and beautifully harmonised. Lastly, over all is that air of dignity and repose which is the special characteristic of this particular artistic epoch.

In going on now to the mosaics of the other periods into which the art history of Ravenna has been divided, we shall leave something behind us which we shall not find again. In drawing and composition hardly any of the other mosaics are equal to those just described. The power of giving monumental dignity without stiffness, and of repeating fixed types without their becoming conventional, belonged to the artists of the first and best time far more than to their successors; though in colour and in decorative richness of effect some of the later ones, notably those in S. Vitale, quite hold their own, and even in some respects surpass the severer works of the days of Galla Placidia.

Passing now to the period of Theodoric, we may omit from consideration the mosaics in what is called the Arian Baptistry, for these are similar in subject to those in S. Giovanni in Fonte, with certain differences of arrangement which need not concern us here. They are also very much restored, and were originally of far inferior artistic quality, and the general effect is very poor when they are brought into comparison with the similar works of the older age.

The mosaics, on the other hand, which we find in S. Apollinare Nuovo are of the highest interest, and are of special value as being unique examples of the complete decoration of the walls of the nave of a great basilica with mosaics. Unfortunately the decorations of the triumphal arch and apse have perished, or the church would be a still more valuable monument. As it is we find three courses of mosaics on the upper walls of the nave—the two upper ones dating from the building of the church, about 504, and

the lowest having been added about sixty years later. Highest of all, just under the roof, we have a most interesting series of mosaic pictures from the life of Christ, which are among the earliest existing works of a similar kind. The pictures on the north side of the nave depict the miracles and discourses of Christ, while those on the south exhibit scenes from His passion. True to the character of the art of the time, these pictures aim more at the representation of Christ as a majestic personage than at exciting dramatic interest in his doings. In the miracle scenes the figure of our Lord always faces the spectator, and His glance is always directed out of the picture, so that it meets the eye of the beholder. The action that is going on does not seem to have his attention, and an attendant figure of a disciple is always introduced to explain by his gestures what it is that is being done. A similar effort to represent Christ always as a figure of monumental dignity is seen in the scenes of the passion, where he is always a head taller than the other figures, and looks like a being of a superior race who is mingling with smaller and weaker men. He is depicted as of mature age, with long blonde hair and beard; and as he stands before Pilate, or moves nobly along the path to Golgotha, we seem to see the figure of some demigod of Gothic tradition, with the melancholy and at the same time the grandeur of the northern hero in his countenance and bearing.

Below these historical pictures we come to a row of saints, fifteen on each side, who stand between the windows of the upper walls of the nave. These are some of the finest figures in Ravenna for that monumental character which is so constant a quality in the mosaics. They are of heroic size, and stand facing the spectator, clad in white drapery and holding in their hands books and scrolls. They are forms of energy and power, with much variety in types of countenance, firmness of pose, and truth of action. The drapery is simply and naturally cast. There is here no falling off from the style of the best period, and these figures even surpass those of the Apostles in the Baptistry, through their greater comeliness of face. To see examples of the decline of the mosaic art at Ravenna we have only to turn to the lowest course of mosaics, just above the arches of the nave, which are, as has been said, of later date. The time that had elapsed between these two portions of the work had brought with it the change from the simple and monumental to the stiff and monotonous. These figures in the lowest course represent on the one side a procession of six-and-twenty male saints, who are advancing from the palace at Ravenna towards a figure of Christ enthroned between two pairs of angels at the east end of the wall, at whose feet they are about to lay down the crowns which they are bearing in their hands. On the other side, a like company of female saints is advancing towards the Madonna, who is similarly enthroned amidst angels. The figures of these ladies, though formal and monotonous, show some effort after grace and some variety in the types of face, while their dresses blaze with gold and jewels; but the male saints opposite are stiff and uninteresting to the last degree. Variations in type and action, where they occur, are on a stereotyped plan, and repeat themselves again and again along the row. The faces are hard and expressionless, the draperies are angular and liney, and show no attempt to indicate the form beneath. A comparison of these wooden representations with the lifelike forms above shows how easy it was for the art of the mosaic designer to degenerate, and what real artistic power was required to preserve monumental dignity without formality and stiffness.

The difference in this respect between the best works at Ravenna and those executed when the art had begun to decline is immense, and no one can judge of the capacity of the early mosaic workers to do really painterlike and artistic work without a study of the remains of the best time. It is necessary to point this out because the best known of the Ravenna mosaics, the two ceremonial pictures of the Emperor Justinian and his consort in S. Vitale, are entirely destitute of the qualities which give their excellence to the earlier pictures. The mosaics in S. Vitale, which only cover a small portion of that beautiful edifice, belong to the third period, that of the conquest and rule of the officers of Justinian. The pictures just mentioned are very familiar through engravings and photographs, and must have disappointed many who sought to find in them an example of the best that the Ravenna artists had to show. As a fact, they are of the stiff and formal kind, much more in the style of the procession in St. Apollinare Nuovo than of the pictures in the baptistry or mausoleum.

The other mosaics in San Vitale are specially interesting as introducing us to a somewhat new style of work. The altar stands in a square space apart, with a vaulted roof, which, with the two walls, is covered with mosaics. On the walls are some scenes from the Old Testament: on the one side the sacrifices of Abel and Melchisedec; and on the other Abraham entertaining the angels, and the sacrifice of Isaac. Higher up on the walls are seen Moses at the burning bush, and the receiving of the law. In all these scenes there is a considerable use of landscape, and attempts at perspective of the most extraordinary kind. Some of the figures are good, and show study of the antique, notably that of Moses loosening his sandal, but as a rule they are stiff and uninteresting. So unlike in character are these scenes to the simpler designs which are the rule in these mosaics, that it has been suggested that they are copies from some large historical series exhibited



elsewhere. On the whole these works do not make a satisfactory impression on the eye, but all the stronger for this is the pleasure with which we look up at the vaulting overhead. Here we have in the centre a medallion with the Lamb of the Apocalypse, which is upheld by four angels in the four fields of the vaulting. The action of these figures is exceedingly fine, and their drapery is so cast as to avoid giving the appearance which we notice in similar figures elsewhere, that the clothes are all hunched up by the uplifted arms. The forms of angels often appear in this style of work, to which they are exactly suited, and these are perhaps the finest specimens that we can point to. But the chief interest of this vault is the wonderfully rich ornamentation with which the whole of the rest of it is covered, and which, for delicacy and splendour combined, cannot be paralleled in these mosaics, nor, indeed, surpassed by any decorative work in the world. From the four corners of the base of the vault bands of fruit and flowers run up to the centre, where they unite with a similar band that encircles the medallion of the Lamb. Peacocks, with extended tails, stand in front of them at the base; birds are to be seen among the bunches of fruit and flowers. Brilliant but harmonious colours of the utmost variety are employed to give to the wreaths and birds the utmost gorgeousness of effect. The triangular fields, in the midst of which are azure spheres supporting the angles, are filled with foliage curling in scroll-like flourishes and volutes over the whole, and bearing at intervals pomegranates, apples, and pears. In two of the fields the ground is golden, and the scrolls of foliage blue-green; in the other two we see purple scrolls outlined with gold upon a ground of green. Birds and beasts of every kind are introduced amidst the foliage. An owl glares out at us with bright round eyes; an excellent stork, with a worm in its mouth, stands below; two peacocks peck at the fruit which has fallen down upon the grass-green ground. Above, we see leopards, deer, fishes, rabbits, and other animals rendered in the most natural way. A stork fishing in pool with a frog is a motive which occurs on the wall underneath. Everywhere we see evidence of the artist's love of nature in her lower aspects, and of his graceful fancy; while the taste which guided the selection and arrangement of the colours is beyond all praise. This is the most perfect development of that style of decoration which we found already in the lower mosaics of the Catholic baptistry.

The rest of the Ravenna mosaics need not detain us. Those in the archbishop's chapel are of various dates and minor importance. There remains St. Apollinare in Classe. The apse and triumphal arch contain mosaics of a somewhat miscellaneous character, and of different dates. The most effective object is a jewelled cross upon a blue ground of most brilliant hue, high up in the semi-dome of the apse. There we see the "one cross" exposed in the sanctuary which was recommended by St. Nilus as the fitting decoration for a Christian church.

A single remark suggests itself in conclusion. Everyone must be struck in considering these mosaics with the exact fitness of the material employed for producing the effects aimed at in the finer examples. A design, which is laboriously marked out on a wall by small coloured cubes of hard material fixed in cement, looks best when it is simple and large. There seems to be something out of character with the mosaic style in the attempt to represent distances of landscape, and all the accessories of a picture. The Old Testament scenes in San Vitale seem to originally belong to another style of work altogether, and to put the mosaic worker to a task not suited to his art. We might even find the same unsuitability to the mosaic style in the pecking-birds and the over-elaborate devices in the vaulting at S. Vitale. The taste displayed in the work is so fine that it seems impossible to criticise it as it stands, but the simpler forms of the wreaths of foliage and fruit, relieved in jewel-like brilliancy from the golden or dark blue ground, seem to suit the material better. The mosaic technique carries with it the notion of laborious application in the execution, and of a durability which is only to be measured by that of the walls themselves, and with these ideas nothing agrees so well as the statuesque monumental forms which are most favoured by the artists of the best period of the craft. Varieties of hue, broken colour, and all the painterlike effects of flesh tone and hair, can, as we have seen, be rendered with admirable success; but it may be doubted whether, when the mosaic worker goes beyond his few simple forms and his single plane, he is not stepping outside the limits of his art.

**Oswestry.**—The foundation-stone of a chapel for the workhouse has been laid. The style is late Perpendicular, the materials being brick and stone from Shelvock quarries. Mr. S. Pountney Smith, of Shrewsbury, is the architect, and Mr. J. Gethin the builder, whose contract for the superstructure is about 1,600*l*. Accommodation will be afforded for 250 persons.

**Kerry.**—A contract for the restoration of the parish church of Kerry, Montgomeryshire, according to the plans of the late Mr. G. E. Street, R.A., has been taken by Mr. E. Davies, of Newtown. The Norman and fourteenth-century arcade and the tower are to remain, and as nearly as is practicable the principal features of the old building will be reproduced. The restoration will be carried out by Mr. A. E. Street, M.A.

## THE ROYAL SOCIETY OF EDINBURGH.

THE first ordinary meeting of the session 1882-83 of the Royal Society was held on Monday—Lord Moncreiff presiding. The President said that, before the business commenced, he ought to call attention to a peculiarity of the present meeting, and to make one or two observations upon it; and that was, that this was the hundredth session of the Royal Society. Most cordially did he congratulate the Society and its members on having arrived at that distinguished period of its history. But it was right he should say that it would be a mistake to suppose that, although this was the hundredth session, they were absolutely centenarian. This was not the anniversary of the birth of the Royal Society. For some reason or other—he did not know how—the hundredth session began before the Society was absolutely a hundred years old. How it exactly came about he was not quite sure. The Royal Society's charter bore date March 1783; and he supposed, like other great institutions, they had an autumn session, and in that way, possibly, the difference was to be accounted for. But if it had been the real date, he need not say that a greater occasion for meditation and observation could not possibly exist. There might be a time for such a word, but on the present occasion he had not the material sufficient to do anything like justice to a theme so large as that. Only in a few sentences would he go back to March 1783, and look back upon the long course that the Society had run—a long and distinguished course, he thought they might all of them say, seeing it was to their distinguished predecessors they owed its glory and its present existence. There had been many speculations as to where the Royal Society came from, and, like a great and spreading organism, its feelers had been examined and searched for with great assiduity. There was a Rankinian Club in Edinburgh towards the beginning of last century, and it was claimed as the foundation of the Royal Society. Then there was a Select Society, a debating club—he thought it was somewhere about 1750—where Dr. Robertson and the great men of those days practised the oratory which they afterwards used with such effect; and they had been told that that to a large extent was the origin of the Royal Society. He had looked into the appendix of Dugald Stewart's Life of Robertson, and there he found a list of members of the Select Society—and undoubtedly it contained, he should say, many if not all of the names of the great men who were alive in 1783 among its members. The only distinctive thing he could gather from the notice was that Adam Smith and David Hume were both members of it, and that neither one nor the other ever opened their lips in the Society during the time they were members of it. But he rather thought the third had more claim, and that was the Philosophical Society founded by Colin Maclaurin, the great mathematician. Undoubtedly it did survive till the period when the Royal Society was formed. Colin Maclaurin, unfortunately for himself, was the engineer employed to defend Edinburgh at the time of the advance of the Pretender in 1745, and he had to leave Edinburgh. Observations had sometimes been made as if Maclaurin had made a somewhat precipitate retreat on that occasion, but the real fact was, he was the last man left there, for he found after all the fortifications were complete that there was nobody to man them, and no army to help in the defence; and it was to be feared he was not the only man who had to retreat, for he rather thought the Court of Session also took that course, and before the Pretender arrived the Judges had departed from their seats. He thought that, however, was the fair parentage of the Royal Society. In 1783 these streams all seemed to meet, and this institution was the result. They had originally a literary side and a physical or mathematical side. At the very first start they had 104 members on the physical side, and 114 on the literary side. He was looking back to an address by his much-valued and lamented friend, Professor Forbes, which was delivered in 1862, and he would go over a few names given there as belonging to the physical class and the literary class, and they would probably agree with him—there were many more who might go alongside of them—that it would be difficult to find in any part of Britain, or in any country out of Britain, an assemblage of persons more distinguished in their respective spheres. The physical side embraced Joseph Black, Clerk of Eldin, Lord Hailes, James Gregory, James Hutton, John Playfair, Dugald Stewart, Lord Bute, Lord Dundonald, Sir James Hall, James Watt, Dr. Small (Dundee), and Patrick Wilson. And on the literary side there were the Lord President, Chief Baron, the Lord Advocate, John Home, David Hume, Henry Mackenzie, Alex. Tytler, the Duke of Buccleuch, Archibald Alison, Dr. Beattie, Edmund Burke, Lord Morton, Lord Hopetoun, John Hunter, Thomas Reid Young of Glasgow, and Mr. Liston. That was a nucleus for a great Society; and certainly from that time forward it grew and prospered until to be a Fellow of the Royal Society of Edinburgh became one of the highest distinctions a man could aspire to. Now, it appeared, they had lasted for 100 years. Whether they all of them would come up to the mark of the great men whose names he had read he did not know. For one thing, we knew many men they did not know, although they possibly knew a great many that we did not know; but during the time that the Society had lasted, from 1783 till now, it was a wonderful retrospect in point of knowledge and



invention and progress—very much owing, to a large extent, to the labours of the very men whose names he had just mentioned. The literary class was presided over by Sir Thomas Miller of Barskimming, who held the office of Lord Justice-Clerk, the office the speaker had the honour to hold. He was a man of very great powers—a great lawyer and a man of very strong literary tastes. But he did not know that the literary class had quite made the progress they might have looked for during that time. It did last about twenty years with great vigour. He had the curiosity to see what the subjects were that were treated of. There were some very vigorous papers indeed, and among them he found a dissertation by John Maclaurin, the son of the mathematician, the object of which was to prove that Troy was not taken by the Greeks after all; and he sought to prove that with an amount of learning perfectly amazing. Perhaps he might be excused if he suggested that possibly some improvement might be made if in this respect also they followed in the footsteps of their predecessors. These observations he concluded by wishing the Royal Society all prosperity in the next 100 years.

### THE CHARING CROSS IMPROVEMENT SCHEME.

AN article entitled "How our Public Improvements are Carried Out," by Mr. H. H. Statham, is printed in the *Fortnightly Review* for December. The writer criticises the plan for the improvement of Hyde Park Corner, and objects to it as being "clumsy and inartistic to a degree"; and he says it "shows no higher sense of effect than we are accustomed to find in the ordinary type of plan drawn up in the office of an estate-agent." But this plan is being carried out; other improvements are only proposed, and objection is raised in order that they may be reconsidered. The first is at Charing Cross. Mr. Statham says:—

Let us turn now to the larger and most important of the impending schemes of improvement—that for the building of new Admiralty and War Offices, the suggested block plan for which has been for some time known to architects and those specially interested in the subject, and has been published by the First Commissioner in his article in a contemporary periodical. The history of the scheme for the rebuilding of these offices affords the most striking example of the unsatisfactory and unbusiness-like working of our Government machinery in dealing with these matters. The operation has been under discussion for more than a quarter of a century. Commissioner after Commissioner has had his schemes; committee after committee has sat, talked, proposed, and done nothing; and the affair now culminates in a feeble makeshift "economy" plan, the economics of which have been rendered necessary chiefly by the continual procrastination of any settled scheme for purchasing land and compiling the plan and design of the buildings. By far the best, finest, and most convenient site that has been proposed for the desired structures is that on the north side of Great George Street, parallel with the block of the India and Foreign Offices, and running up to Parliament Street, the present western boundary of which street, at that point, would of course have been set back so as to widen it, and carry out in this way a much-needed and long-promised improvement. Probably at the time when the idea was first mooted, the Great George Street site might have been acquired for half a million; now it is said to be worth more than twice that, and is to be abandoned from motives of economy, after nearly a quarter of a million has, however, been expended in a bit-by-bit tentative acquirement of property on the site, which, for any immediate purpose to which the Government can put it, seems to be now practically money thrown away. The present writer does not claim to be a financier, but it seems patent enough to any one that if there had been a permanent administration, combining the best surveying and architectural ability available, to look after these matters, instead of their being left to be the plaything of a succession of First Commissioners of Works, money and a fine architectural opportunity would have been saved. The Great George Street site would combine the public offices in one great group near the centre of Government, and would give the hint for a rebuilding of the south side also of Great George Street at no very distant date, thus furnishing a fine architectural climax to the boulevard of Birdcage Walk, and a noble approach to the Houses of Parliament from that quarter, the mean aspect of which at present contrasts sadly with the great towered building beyond.

The new scheme consists in squeezing in the new offices between the Horse Guards and Messrs. Cocks & Biddulph's Bank, projecting backward over a considerable portion of Spring Gardens, in such a way that the Whitehall elevation and the Park elevations must appear almost as different buildings, and no unity of architectural effect can be realised. Here again we see the result of the utter want of continuity in what may be called building politics. Had this scheme been contemplated for any length of time, it should have been the bounden duty of some one to negotiate for the sites of the Messrs. Drummond's and Messrs. Cocks & Biddulph's banks before they were built; the existing houses between them could then have been easily acquired at no exorbitant price. But now the banks in question are built, and the cost of disestablishing them

would be very great; though some of us may think that it would be worth while to pay a good deal merely to clear so poor and commonplace a building as the former off a fine site which it completely spoils. Had the whole frontage been secured, there would have been the opportunity of producing a fine mass of buildings in the new work, and of so arranging them as to run the line of the Mall through into Charing Cross, thus securing a beautiful effect as well as a much-needed new route.

The First Commissioner, however, tells us we need not mind that, as he can provide a road into the Mall by Drummond's Bank, with room for two carriages to pass; and, if we have a cab-route, what can we wish for more? Let architectural effect go; we need not trouble about that, for are we not going to save money? That is the whole of the argument that can be urged in favour of the new site; it is economical. Even if the banks were bought, however, and the entire site and its possibilities secured, it would not be such a desirable one as Great George Street on architectural grounds. It would involve the removal of the old Admiralty and its adjuncts, which are really of some interest in their way, more so than anything in Great George Street (except one or two of the old houses west of Delahay Street), and the new building and the Horse Guards would materially injure each other. Far better, on architectural grounds, to group all the new office buildings together, and unquestionably better on practical grounds; and it may still appear that the wiser economy will be to purchase the Great George Street site, and note down the increased price at the present day as one of those pieces of experience for which we all have to pay heavily. One of the practical objections which is urged against the site, that the street is largely occupied by the offices of professional men who are under the necessity of being near the Houses of Parliament, may easily be dismissed. As soon as it was known that this site would be used, new and superior offices would certainly be built on every available plot in the neighbourhood; the demand in such a case is always met by a supply. It is worth note that the block plan of the new buildings shows them arranged around quadrangles: this is one of the least sanitary principles of arranging large buildings, especially where their height must be considerable, unless the quadrangles are very large; even then the re-entering angles are apt to become receptacles of stagnant air. Wherever the buildings are ultimately erected, this should be reconsidered.\*

### ILLEGALITY OF CHANCEL GATES.

AN application was made at the Manchester Consistory Court on the 1st inst., by the Rector of St. Gabriel's, Hulme, for powers to erect a low stone wall and iron gates across the entrance to the chancel, to place the pulpit in a different position to that originally intended, and to alter the arrangement of the seats. No private rights were affected, and the parishioners by resolution had assented to the works. The estimated cost was about 120*l.*, to be defrayed by private donation. Mr. Christie, Chancellor, said the alterations which were proposed appeared to be very proper, excepting in one particular, and that was as regarded the erection of iron gates across the entrance to the chancel. He had on two previous occasions decreed the granting of a faculty for the erection of gates across a chancel, and he might say that he had no personal objection to gates, and if it were a matter in his discretion, or in the discretion of the Court, he would have no hesitation in granting it. But since the last faculty was granted his attention had been called to a decision of Lord Penzance, which decided clearly and distinctly that gates were illegal, and that faculties could not be granted for the purpose of their erection. The decision was in the case of *Bradford v. Fry*, reported in Law Reports, Probate Division, vol. iv. p. 93. There had been a decision, and there were some words used by Dr. Lushington, in the case of *Westerton v. Liddell*, which were an expression of disapproval of gates, but they had not impressed him with the idea that they amounted to a positive refusal to grant. He thought they were an expression of opinion which had reference to that particular case, and were not of general application. The Chancellor of the London Diocese, Dr. Tristram, in two cases—that of St. Augustine, Haggerston, and in the case of the parish of the Annunciation, Chislehurst—held that he was bound by the words of Dr. Lushington in the case of *Westerton v. Liddell*, and that he could not grant a faculty for the erection of the gates. Then there came this other recent case before Lord Penzance of *Bradford v. Fry*, where there had been erected, without a faculty, a screen and chancel gates, with other alterations, and the application was that they should be taken down. Upon that coming before Dr. Roberts, Chancellor of the Diocese of Rochester, he ordered the whole of the articles to be taken down and removed, on the ground that they had been erected without a faculty, and that no faculty had been applied

\* In cases where a quadrangle seems the only means for securing the necessary accommodation, it might be worth while to try the effect of placing the main staircases in the angles, leaving them partially open for a through current of air. This might be made to realise a new and picturesque effect, arising out of strictly practical requirements, which is just what we want to see more of in modern architecture.



for their confirmation. There was an appeal to Lord Penzance, and he decided that he could grant a confirmatory faculty for everything except the gates of the screen, and those he ordered to be taken down. He (Chancellor Christie) would not make a decree now, but if the parties desired he would adjourn the matter in order that they might consider it. Having regard to the decisions given, he was satisfied that it was not within his power or the power of the Court to grant a faculty for the purpose of erecting gates. It was clear that that Court was absolutely bound by the decision of Lord Penzance, who was not merely Dean of Arches, but was now Judge of the Court of Appeal at York, and his position was therefore stronger, although one would have always felt bound by appeal to the Court of Arches. He would, consequently, either as they might find the most convenient and preferable course, simply refuse the faculty, and as to that point they could appeal, and in regard to which, if they wished the matter argued in the Court of Arches, he would give every facility. He should refuse it, not on the ground that the erection of gates was in his mind inexpedient, but because he was simply bound in the matter. In the other case he would adjourn it until the next Court, so that they might consider whether they would like to take a faculty without the gates.—The Rector of the church (the Rev. W. Milner) said he could say nothing about it himself, but the gentleman who was doing the work felt very strongly with regard to the gates, and he was afraid if they were not allowed the whole thing would fall to the ground. He (the Rector) might point out that there were gates at the cathedral, and they had been told to make the cathedral their model.—The Chancellor said he had no personal feeling in the matter, but he was not aware that anyone was ever told to make any ornament or structure in the cathedral his model. After further conversation, the Rector and the parishioner who had undertaken the work, who was present, asked leave to retire, and ultimately they stated that they would accept a decree without the permission to erect the proposed gates. The parishioner said he wished to be allowed to express his deep regret that the Chancellor had not power to grant the application in its entirety. The decree was granted accordingly.

#### THE LEEDS ARCHITECTURAL SOCIETY.

THIS Society has entered its new rooms over the Liverpool and London and Globe Insurance Offices in Albion Street, which have been adapted to meet its requirements. On Monday evening a large number of the members assembled to hear an address by Mr. Edward R. Robson, F.S.A., architect to the London School Board, on "The Foundations of Art in Architecture." The President of the Society, Mr. James B. Fraser, F.R.I.B.A., occupied the chair. Mr. Robson deprecated the practice of copying, so prevalent at the present day. An architect wishing to be a true artist would endeavour to put some originality into his design. The young men in the profession should be carefully taught the proper use of every material with which they had to deal, as well as the science of construction. They should also be urged to cultivate an eye for colour. It was to be hoped that architects in the future, instead of copying old styles, would seek to establish a school of English architecture which would embrace all that was good in the old styles. He urged the importance of good form, proportion, and colour. Truth, intention, and rigidity were also of great moment. Truth was as essential to good architecture as to moral character in man; it lay at the foundation of all things in architectural art. As to intention, the absence of it was the cause of so much bad architecture. "Rigidity" was used to express a particular aesthetic quality or value opposed to easy softness, incoherence, or languid beauty, and having for result the stamping of the work with vigorous character. We recognised it in fine sculpture constantly, especially where it suggested imminent or actual action of the figures. Mr. Robson exhibited a large collection of beautiful photographs of early Italian architecture. A discussion on the subject followed, and at the close a vote of thanks was accorded to Mr. Robson, on the motion of Mr. J. W. Cannon, seconded by Mr. Thomas Ambler.

#### BIRMINGHAM ARCHITECTURAL ASSOCIATION.

LARGELY attended meeting of this Association was held at Queen's College on Tuesday evening last, the chair being occupied by the president, Mr. J. J. Bateman. Eleven gentlemen were proposed as new members, after which the vice-president, Mr. W. H. Kendrick, delivered an address. A discussion followed, in the course of which a vote of thanks to Mr. Kendrick was proposed by Mr. F. E. F. Bailey, seconded by Mr. W. G. Mantle, supported by Messrs. Norman Gething, Fred. G. Hughes, J. Wood, and the honorary secretary, Mr. F. W. Franklin Cross, and carried unanimously. The president, in putting the vote of thanks, touchingly alluded to the great loss the profession and the country at large had sustained by the death of George Edmund Street, whose monument, the New Palace of Justice, was opened on Monday last by the Queen.

#### THE WATER-COLOUR SOCIETIES.

THE following letter was addressed to the *Times* by the authorities of the Institute of Painters in Water Colours:—

The Council of the Institute of Painters in Water Colours have had their attention drawn to the able article in the *Times* of November 25, in which, while commenting on the honour which her Majesty has graciously conferred on the art of water-colour painting, you advocate the union of two societies representing that branch of art, and the establishment of an exhibition open to all water-colour painters.

They gladly welcome your powerful advocacy of a scheme which has long been a cherished project of theirs, and beg to thank you for your recognition of the Institute as a co-equal representative with the Royal Water-Colour Society of water-colour art. But they desire to point out that the responsibility for the present division which you justly deprecate does not rest with them, though one sentence of your article seems to imply it.

The foundation of the Institute fifty-one years ago was not the result of a "schism" in the older society. It was the only resource of men who had no place in that society, and had no other means of bringing their works before the public than by organising a separate exhibition. How little the Institute deserves the blame of the existing disunion may be gathered from the following facts:—

About two years ago the Institute, after long negotiation, secured a site in Piccadilly suitable in every way for the erection of galleries, which from their size and position would be well adapted for a representative exhibition of water-colour art, and as soon as the lease was in their possession made overtures to the then "Society of Painters in Water Colours" for an amalgamation. In these communications the advantages that would accrue from the union of the two bodies were set forth. It was pointed out that, commanding, as they would then, the confidence of all the artists in the country, they would be able to gather under one roof such a collection of water-colour paintings as would show the capabilities of which the art was possessed.

The first advance on the part of the Institute was met by a refusal, but after an interval the Institute renewed the negotiations, and in the course of them met in every possible way the difficulties that were raised by the other Society.

In favour of their proposals they urged that an opportunity not likely to recur was offered of putting an end to a division which you rightly describe as detrimental to their art, and suggested that if this fusion of the two societies took place the society so formed might receive a royal charter and diploma, and would then stand in the same relation to water-colour artists as that held by the Royal Academy to painters in oil.

Though many of the members of the Royal Water-Colour Society expressed themselves in favour of the scheme, the majority were satisfied with things as they were, and the negotiations closed.

Thenceforward nothing remained for the Institute but to carry out the plan they had formed for an open exhibition unaided by the Royal Society.

The relative position of the two societies may be described in a few words. The honours go to the Royal Society of Painters in Water Colours; the duties which, as you point out, should accompany them, are left to be fulfilled by the Institute, which is shut out from any participation in those honours.

#### THE BISHOP OF PETERBOROUGH ON CHURCH BUILDING.

THE annual meeting of the Northampton Church Extension Society was held last week, under the presidency of the Bishop of Peterborough. His lordship said that he was strongly in favour of building for the necessities of the present with capacity for the needs of the future. If they built too small a church, they did not do the work which was necessary to be done, and if they built too large and ambitious a church they chilled and depressed the small congregation which gathered therein. He urged the necessity of avoiding running into debt and extravagance, and said they should be careful in their work of building new churches, for he could not help thinking there was room for economy in church building. He did not in the least deprecate any lavish expenditure where there was an abundance of money, but he reminded them they must cut their coat according to their cloth, and they must do as others did. If they could not pay 20s. in the pound they must pay 10s. or 2s. 6d., as the case may be. In increasing the number of new churches they must regard quantity first, and then quality; and he could not help thinking that the numerous church building societies would make more use of their funds if they offered a handsome premium for a design of a useful, handsome church, with no unnecessary or expensive front ornamentation. He did not know that Gothic was by any means the cheapest form of architecture, yet every architect seemed to think it must be Gothic.

The Rev. C. T. Gordon said that cheap churches might, he thought, be associated with cheap morality; and, in building costly churches, he felt they were not merely gratifying some passing



vanity, but were doing something for the glory of God. His experience had been short, but he knew of one church, the appearance of which, if not a disgrace to the See of Peterborough, was certainly not such as would inspire people with feelings of religious awe.

The Bishop of Peterborough said that when he expressed a hope that they would build cheap churches, he did not mean shabby ones. His idea was that in cases where they had not sufficient money to build the church complete they should do so by degrees. If, however, they had money enough to build a magnificent church, by all means let them do so; but he thought the parishioners would be better pleased if they began and built them a church at once rather than keep them waiting seven years for a magnificent edifice. He did not regret one shilling spent on a church for the honour of God or its adornment.

### SOCIETY OF ANTIQUARIES OF SCOTLAND.

THE annual general meeting of the Society was held on November 30. The Earl of Southesk was admitted without ballot, and eighteen candidates were admitted Fellows after a ballot. The vacancies in the list of office-bearers were supplied by the election of Dr. Arthur Mitchell as one of the vice-presidents, and Dr. Robert Munro, of Kilmarnock, and Mr. John J. Reid, advocate, as new members of Council. Sir J. Noel Paton and Mr. Francis Abbott were re-elected as the representatives of the Board of Trustees, and Messrs. Robert Hutchison and James Macdonald, W.S., were re-elected auditors. The Secretary read the names of five Fellows deceased during the year, and announced that the number of Fellows added during the year had been fifty-six. The annual report to the Board of Trustees showed that the number of visitors to the Museum during the year had been 99,676, and that 439 articles of antiquity and 2,936 coins and medals had been added by donations, and 6,230 articles of antiquity had been added by purchase throughout the year. The report also stated that in consequence of the increasing number of objects thus annually added by donation and purchase the space allotted to the Museum had become quite insufficient for their classification and exhibition. The Treasurer's statement of the funds of the Society was satisfactory, and it was resolved that an abstract of the accounts should be printed and circulated among the Fellows. The Secretary reported that the annual volume of the Society's Proceedings would shortly be issued, and that the first meeting for papers would be on the 11th inst.

### ARCHÆOLOGY IN BIRMINGHAM.

AT the first meeting of the Archaeological Section of the Birmingham and Midland Institute, which was held last week, the President, Mr. S. Timmins, in his opening address referred to the loss the section had sustained during the year by the deaths of the senior honorary secretary, Mr. Allen Everitt, and of Mr. Charles Bayley, of West Bromwich.

Mr. J. A. Cossins read a paper on the excursions of the past session. The buildings and other objects of interest referred to in the paper were illustrated by a large number of very beautiful drawings and sketches by Mr. Cotton, which were displayed on a screen in the room. Mr. Cossins, after enumerating the very great number of cathedrals, churches, castles, and other objects of interest visited during the past twelve years, remarked that the time and money thus spent should by this time have produced very marked results in extending a knowledge of archæology, and in cultivating a love for and, as naturally would follow, a desire to perpetuate and protect the antiquities we still possess, restorations notwithstanding; and reminded his audience that the Midland Institute was not founded to organise pleasant picnics, but to promote education. He remarked upon the large proportion of mediæval buildings visited, and said the builders of the Middle Ages, with an utter absence of self-consciousness, each one, by imitating what had gone before, and by endeavouring to improve features or intensify effects that had impressed him, added his item to the progress of his art. And thus the architecture of the Middle Ages, from the first rude imitations of Roman architecture, advanced gradually to its culmination in the thirteenth century, and as gradually declined to what is known as the Elizabethan style. After that came the revival of Classic art and literature, and architecture ceased to be a living art. The excursions of the last year were marked by one of an exceptional character—namely, a visit to Stonehenge. As the interest shown in that mysterious monument on the occasion was so great, a large part of the paper was occupied by a short abstract of what has been written on the subject from Geoffrey of Monmouth to Inigo Jones, and in modern times by Dr. Guest and Mr. Long. The conclusion Mr. Cossins had gleaned from the above writers was that Stonehenge consisted of two monuments—the oldest, of a vast antiquity, consisting of the inner circle of unhewn monoliths of syenite, and the inner oval of a similar character; the outer circle, of large hewn stones with lintots, and the vast trilithons of local sarsen stones were of much more recent date, probably added by the Belgæ. He thought

there could be but little doubt of its having been a temple devoted to sun worship. Mr. Cossins then gave a short account of each place visited on the first three excursions of the year, referring to the illustrated drawings; after which Mr. Cotton described the last excursion—that to Harvington and Norton.

The President then proposed a vote of thanks to Mr. Cossins and Mr. Cotton.

Mr. Cossins, in replying, again called upon the members to assist in spreading a love for our ancient buildings, and in combating the absurd notion that unfortunately prevailed, that an ancient work of architecture or painting could be in any way renewed when once destroyed. He also urged the claims of the Society for the Protection of Ancient Buildings.

### GENERAL.

**Messrs. Ashton & Green, Limited**, supplied and fixed the whole of the slates for the roofs of the new Law Courts. The slates are Ashton & Green's "Permanent Green," and their pleasing colour contrasts well with the masonry and enhances the effect of the building.

**Mr. J. A. Gatch**, of Kettering, lectured at that town last week on "Art in Costume," the proceeds of the lecture being intended for the benefit of the school building fund.

**Mr. Quarrier**, the founder of the Orphan Homes of Scotland, in the neighbourhood of Glasgow, has received a gift of 1,500*l.* to build an additional one at Bridge of Weir.

**The Pictures** sold in the Dudley Gallery during the eighteen years of its existence amount to 98,000*l.* Henceforth it is to be known as the "Dudley Gallery Art Society."

**A School of Art** is to be erected in Warrington according to plans which have been prepared by Mr. W. Owen.

**A Prize of Fifty Guineas** is offered by the Liverpool Corporation for the best design for a wholesale fish market, the design to become the property of the Corporation.

**The Aberdeen Town Council** have decided to proceed with a Bill for the improvement of the city at a cost of 216,000*l.*

**Messrs. W. B. Wilkinson & Co.**, of Newcastle-on-Tyne, granite concrete paviors and general workers in concrete, have taken offices at 77 Great George Street, Westminster, where samples of their work can be seen, and information respecting it will be given. The granite-faced flags and fibrous slab plastering are becoming as well known as the paving for which the firm has long had a reputation.

**A Collection of Cloisonné Vases** and other work has been purchased from Mr. F. Elkington for the Corporation Art Gallery, Birmingham.

**The Homerton Workhouse** is being painted throughout with the Albissima Sanitary Paint.

**Messrs. W. Oliver & Sons**, of Bunhill Row, have supplied nearly the whole of the seasoned wainscot oak used in the fittings, of the new Law Courts.

**Messrs. Lindsay & Co.**, of the Paddington Ironworks, will furnish the ironwork, consisting of columns, riveted girders, roofing, &c., for the Great Western Railway Company's new stables at Paddington and their stores at Didcot, altogether amounting to over 500 tons.

**The Stoke-on-Trent Board of Guardians** have decided on erecting a new hospital at the workhouse at an estimated cost of 13,000*l.*

**A Sketching Club**, formed in connection with the Hanley School of Art, held this week an exhibition of the work executed by the members during their holidays.

**A Statue of Robert Burns**, which Mr. J. G. Crawford, a retired Glasgow merchant resident in London, intends to erect on the Victoria Embankment, will be entrusted to Sir John Steel, R.S.A. The cost is estimated at about 2,000*l.*

**The Manchester City Council** on Wednesday, by a majority of forty-six votes to six, decided to support the proposed ship canal scheme.

**The Edinburgh Town Council** have adopted the following resolution:—"That it be remitted to the Lord Provost's Committee to consider and report as to the most appropriate manner of recording the sense which the Corporation and people of Edinburgh have of the services rendered to the city by Dr. Wm. Chambers, especially from the Improvement Act of 1866 and the restoration of St. Giles's Cathedral."

**The Third Annual Exhibition** of Painting and Etching on China, &c., was opened at Leamington on Friday in last week.

**A Crystal Palace** is to be constructed at Ilfracombe, and a company, it is said, has been formed for carrying the project into execution.

**The Liverpool City Council** have agreed to a recommendation that a grant of fifty guineas should be made to Mr. W. Goldstraw, chief assistant building surveyor, for services rendered out of office hours in drafting the engineering clauses of the Improvement Act, 1882.



# The Architect.

## ARCHITECTS' WORKING DRAWINGS.



R. SEDDON, in choosing a subject on which to discourse for an hour to the young men of his profession a fortnight ago, characteristically selected what he indicated, equally characteristically, by the title of "Sundry Working Drawings"; and, we need scarcely say, found therein abundant opportunity for expounding a good deal of interesting pre-

cept and example. Amongst other things, he necessarily took up the question how the working drawings of architectural work ought to be drawn so as best to suit their purpose—a point seldom treated of, but one of the greatest possible importance, to all who are beginning architectural professional life in these days, when draughtsmanship, more than it ever has been before, is an element of great power.

Without pausing to point out how far we are following Mr. SEDDON'S argument, and how far we are taking leave to supplement it, we may observe that the drawings which an architect makes of his designs are, in one sense, of two distinct classes. There are those by which he aims at the representation of what he calls "effect"; and there are those by which he defines, quite prosaically, the work of the workman. Properly speaking, the effect-drawings are for the whole outside world, and the work-drawings for the initiated few. The effect-drawings—or, as Mr. SEDDON seems to wish to call them, significantly enough, *sketches*—have for their purpose the indication, in language pictorial and attractive rather than strictly and technically true to fact, of what the result of the building is: professed to be; the work-drawings, on the contrary, are only meant for the application of the foot-rule of the artisans whose tools are to shape the materials to the production of that result. The one style of drawing is all consciousness, the other all unconsciousness; the one is open to the introduction of not a little poetry, the other is pure prose. The less poetry in the effect-drawing the better, some will say, and best when there is none at all; but that is perhaps matter for argument. At any rate, a still greater number will maintain that the utter absence of all sophistication in the work-drawing is a principle never to be compromised; and we may as well acknowledge nevertheless at once, with whatever amount of regret, that compromised it often is in these days, and to an extent as remarkable as the consequences of such licence are mischievous.

In so far as the general public have of necessity to be allowed, as paymasters, to determine the choice of an architectural design before execution, it is manifestly desirable that a drawing-language should be used of such a kind as to be understood by all. Speaking *ex cathedra*, we are bound to say that the general public have no right of choice whatever, simply because they do not possess the skill whereby to choose aright. A member of Parliament, that is to say, or a member of the committee of a public institution, has no more architectural understanding by virtue of his office than the servant who opens his door. Not only is the effect of advanced artistic composition beyond his criticism, but the very draughtsmanship by which it is represented is unintelligible speech. It is notorious that this is the case to a degree which it would be impolite to press. The story goes that when a certain sufficiently intelligent aboriginal African was first shown a photographic portrait, he had great difficulty in determining whether it was the end of a house or the sail of a ship. Much more so, when a sufficiently intelligent merchant or manufacturer of our own country has presented to him the design for a town-hall or a church, we may take it for certain that, but for ingenious drawing, he could not tell the head of it from the tail, and even at the best has but a very dreamy notion of what it all means. Hence, by the way, the reliance which such an adjudicator is always inclined to place upon a knowledge of who the author is, and the special confidence which he has in the work of a personal friend, or the friend of a friend. Few, if any, who are not specifically trained architects, are acquainted with even the alphabet of architectural drawing. But still, as we have already said, the purse-master

must be design-master whether we will or no; and thus arises the necessity for employing such a mode of representation beforehand as shall convey to the ordinary observer, if not a knowledge of the subject technically, at least some sort of impression that shall be favourable. Leaving plan out of the question as we are doing, as well as construction, and confining our attention to the artistic superficiality alone, we need scarcely remind the reader of the various fashions which, during the last half century, have prevailed in this art of pleasing, not to say this delusive sophistication. There was the back-lined elevation; a very flat and futile presentment. There was the elevation sciographical, shaded in Indian ink or sepia, and "washed over" in burnt sienna, with indigo for the window and door openings; a mode which was not by any means untrue to fact, although always vastly inferior in England to the exquisitely delicate French manner which is still practised, and which is a proof remaining in full force of the unexpected superiority of the elevation to the perspective. Then there was the showy perspective itself, coarsely shadowed in some neutral tint, but most effectively "got up" by such artists as ALLOM; passing eventually into bright blue skies and purple clouds, yellow stone and green slating, red window draperies and half-drawn blinds, horses and carriages, fine ladies and their parasols, gentlemen pointing their canes towards the house, children with hoops and pet dogs, and, oh, such lovely trees! This fascinating manner went out in a great measure with Mr. EDWARD BARRY, who employed the most excellent "artists." There was also a kindred but much less objectionable style of "tinted perspective," which sought an effect more truly architectural and less flagrantly pictorial, by means of sober and sketchy tertiary colours instead of vulgar primaries, and which, therefore, pleased the more refined eye, and no doubt inspired a certain visionary admiration of whatever might be serenely graceful in the architectural forms. More recently, however, all has been etching. The rivalry between the elevation and the perspective is still maintained, but in both the peculiar,—and, let us boldly say, frequently most entirely deceptive—effect of scratch-drawing (*sgrafito* on paper) is pursued with reckless daring in whatever direction the subject may suggest, although, we do not for a moment wish to deny, sometimes with an exquisite power of draughtsmanship which, the less it is architectural, is only the more charming. At any rate, we have suggested the very considerable variety of ways in which the architect's drawing for the uninformed has been done amongst us, and it is plain enough that the work-drawing is something of quite another character.

Now it is surely equally plain that the architect ought never to allow himself to design by means of any of the sophistications we have been speaking of. And yet it is notorious that even the working drawings, nay, even the details to a large scale, are by many draughtsmen got up in etching with a delusive vigour which, if it were possible to say such a thing, can only be really intended to impose upon the designer himself. Of course it is easy to "design in beauty," if the mere beauty of a scratch-drawing is to be accepted as the aim and end of the design. But such easy work is in fact but the easy descent to the Avernus of building-art, and when the building itself displays at last, in contrast with the facile dressiness produced by the goose-quill, a nakedness and rudeness which take a plain man's breath away, is it to be wondered at that architecture should be pronounced a fallacy, and the Inspired Mason invoked to lend a helping hand?

To put the case very mildly, we should like to be permitted to say that, whatever more or less deceptive draughtsmanship may have to be used to tickle the eyes of the mere purse-master, the architect, for his own work of designing, ought almost never to employ any other mode of representation than the plain and perfectly truthful linear elevation. If others do not understand that kind of drawing, he does. If others are deceived by sophistications, so will he be. Exceptions excepted, and as seldom as possible, the simple elevation, drawn in the strictest geometrical form and severity, may always be relied upon. Even the critic, if he understands his business, will always prefer this plain elevation to anything else.

Another good rule in making designs, whether for the general effect or for the detail of the composition, is to carry on simultaneously two renderings of the subject, one to the necessarily small scale of the "plans," and the other to a large scale, besides doing the mouldings at full size. That is to say, the *ensemble* ought to have side by side with it the detail, each to guide and check the proportions of the other. Where the



art of proportion is disregarded—and it is so just now a great deal too much, by reason chiefly of certain delusive effects of draughtsmanship in which distortion serves the same purpose—then this simple expedient may go far to expose the evil and provoke correction; but where the designer is carefully manipulating the graces of harmonious forms, as the true architect is doing every moment, then the process of double composition is of the utmost service to his effects. To design by means of a small scale drawing alone is always unsafe, even when the pencilling is the most minute; to do so with rough “masterly” lines is generally fatal. Designing on a large scale is more difficult to do; but for that very reason it is always less open to error.

The profession owes its thanks to Mr. SEDDON for taking up this subject, however incidentally, and we commend it to the thoughtful practical consideration of all designers who would have the work of the builder turn out as well as that of the draughtsman.

## THE “CERCLE ARTISTIQUE DE LA SEINE.”

BY A CORRESPONDENT.

A NEW ART CLUB, styled “Cercle Artistique de la Seine” (3 bis, Rue de la Chaussée-d’Antin) was founded last winter, at the instigation of the ex-Minister M. LEPÈRE, and it bids fair to prove as attractive as are its older rivals, the Cercle of La Place Vendôme and of the Rue St. Arnaud, better known as “le Merltons” and “la Crémérie.” The new club has already 460 members, and among them are many able artists. M. EUGÈNE FEYEN is the presiding genius. His *Repos des Maïssonneurs* and *Marée Basse* attracted attention at the last Salon. To his initiative it is due that an annual exhibition of the works of the club members has been held, to the exclusion of the paintings and sculpture of men not belonging to the Cercle. To the courtesy of the committee the public are indebted for admittance to the galleries, which occupy part of the series of reception-rooms on the first and second *étage* of the club-house. Unfortunately these rooms are not lighted from above, and in consequence the pictures are scarcely seen to advantage. However, they are hung with considerable judgment, and do not suffer from overcrowding.

A clever statuette in terra-cotta, by M. GUIBERT, occupies the centre of the first room. The subject is EVE gathering the forbidden fruit. Her figure is thrown back against the trunk of the tree, from an overhanging branch of which she plucks the apple. The pose of the figure is graceful, and the modelling of the limbs strikingly beautiful. We prefer *Eve* to M. GUIBERT’S *Punition*, typified by a lad who, with his right hand, strangles a cat, while he shows it the bird it has killed with his left. The attitude of the figure recalls that of the boy in FOCARDI’S popular group, whereas the treatment of *Eve* is original and has great charm. M. E. GUIBERT is a young artist of promise.

In the first room we find a work by T. RIBOT, with the usual strong contrast between light and dark shadow, which perhaps becomes somewhat monotonous in the works of this master. A sick girl listens while a veiled sister reads to her, a hooded figure is seated opposite to the child. The modelling of the heads is admirable, and the solidity of the fustian garments of the women is unquestionable, but the lovers of brilliant colour will fail to perceive why so much genius should exhaust itself in producing a picture in which, save a dull red on the binding of the book the child holds, there is not a tint save brown, dark olive, and dull grey. The intense gloom created by M. RIBOT’S brush is in opposition to the sunny light of M. RAFFAELI’S *Le Retour du Marché*. Having met a gentleman returning from market taking his ease on a hot summer’s day on the edge of a grassy bank, straightway the artist painted him and his basket of fresh vegetables in the foreground of a landscape, on which the light is seen falling softly, but it is not improved by the ungainly aspect of the figure.

From Holland we have an orchard, painted by M. VAN DAMME-SYLVA, entitled *Matinée dans les Polders*, which fresh morning a girl is enjoying, as she leans against a tree whose overhanging branches throw her figure into half-light; her blue apron, tied back over a gown of dark serge, assumes a grey tint. She leans on her rake and watches a couple of geese, separated from the orchard by a sunk fence fringed by reeds, now in flower and most delicately green. Farm buildings skirt

the orchard, built in a grey stone, against which the girl’s figure is well thrown out.

Mdlle. DESBORDES contributes a charming panel, intended for the decoration of a boudoir, wherein use has been made of the tall hollyhock, with its faint yellow blossoms, and the pale lilac blossoms of the mallow, whose blue-green leaves are boldly drawn and fill the foreground. M. MATHON’S *Verger à Honfleur* is suggestive of spring. The orchard, on the slope of a hill, promises a yield of fruit. Beyond stretches the bay, calm and blue, in the clear light of a spring morning. M. MATHON is a young artist, a pupil of M. DAUBIGNY, whose style he has successfully adopted.

M. L. SERGENT’S sketches of mounted and dismounted Arabs are equally masterly. Near them is a charming and amusing scene, characteristic of the veteran M. MONGINOT, and, as usual, fascinating from its harmony of tone. The door of a cage has been left ajar: unluckily for its feathered inmates, a cat has seized the opportunity. Green-eyed and grey and fluffy, he emerges from the open wicket, a yellow-winged victim in his claw, while dead and dying lie on the old oaken table, a purple and crimson “cardinal,” and by its side, still quivering and gasping, a green parrot. The background, which is intensely rich in tone, throws out the brilliant plumage of the tropical birds, further shown to advantage by a deep frame of carved ebony.

It may be remarked that frames are a subject of preoccupation at present in Paris, and they are reckoned quite as much *objets de luxe* as blue china. The frame which encloses a trumpeter of the *chevaux legers*, by M. EDOUARD DETAILLE, is exquisitely carved—the dead gold tinting the grey tone of the paper on which he has drawn the young soldier, whose uniform of blue laced with white is partially concealed by the military cloak, which he has thrown open as he prepares to sound the *reveillé*. The artist has never surpassed this drawing, in which detail is expressed without loss of breadth.

It requires no small amount of courage to feel less than enthusiastic in presence of a work signed E. DUEZ. He possesses immense technical knowledge, but the tone in which he paints stretches of grass-land is invariably dull and heavy. His *La Falaise* shows verdure of this unattractive green. A gleam of light falls on the sea and turns its surface to silver; a flight of seagulls against a bank of clouds foretells a coming storm; and in the atmosphere there is the peculiar clearness which is so often observable before a storm. M. FEYEN-PERRIN takes us farther to the north of France, but on the same coast of which DUEZ has given us a view. In Brittany women share with their masters the toil of out-of-door work. *Ramasseuses d’Huîtres* brings this vividly before us. The celebrated *huîtres de Cancale* have been gathered by sturdy fishwives, who have piled the oysters in a roughly-built cart, which a strong peasant girl is dragging along. Her figure is bending all its strength against the broad leather strap which serves for harness. Two Cancallaises, clad in crimson and blue, their heads enveloped in snow-white handkerchiefs, push the cart from behind. The neutral tones on the shells and the grey of the stretch of wet sand in the background contrast well with the dark figures of the three Bretonnes. The sunny atmosphere in this picture increases the gloom which M. ROLL has thrown on the canvas hung next to it. On first glancing at the *Paysage* nothing but darkness is apparent; after careful study one discerns, emerging mysteriously from the gloom of a winter’s night, a figure making the best of its way along the road which crosses a vast plain towards a cottage etched against the horizon, from one window of which a light faintly glimmers. A single streak of salmon-pink still tinges the sky, the last lingering reflection of departed day. The genius which carried off the Prix du Salon in 1880 by the *Grève des Forgerons* has indulged a caprice when he painted darkness visible, but to prove that his palette is not always charged with Cimmerian gloom, gives us an old man’s head, entitled *Pochade*, the work perhaps of an hour, but marvellously rich in colour.

M. BENASSIT’S *Cavaliers (La Halte)* is characteristic of French military life. A couple of dragoons, well seated in their saddles, halt outside a wayside inn; the blues and crimsons of their uniforms are seen against the ochre of the old building; they inquire their route of three foot soldiers, whose kits, strapped over their grey overcoats, convey the impression one had during the Franco-German campaign that the French infantry is overweighted.

A sea piece, by the Belgian-Parisian, A. STEVENS, takes



people by surprise, for hitherto the painter's name was associated with brilliant portraits of the queens of the hour, but a caprice has induced him to depict with painful truth the sea of the Channel in a miserable day. A rift in the overhanging clouds allows a gleam of white light to fall on the grey sea, and reveals the *Calais-Douvres* steaming on. The subject, however rife with unpleasant memories to shore people, is most cleverly rendered. *L'Atelier* is in M. STEVENS' more usual style. M. VOLLON's fruit piece is good, especially in regard to the bowl of blue china, which pleasantly effaces the impression made by M. STEVENS' channel passage, and inclines one to look with interest on M. ROYBET's *Card Players*, gentlemen of the sixteenth century, who appreciate the beauty of Persian carpets, and cover the table on which they play with one we suspect to have been woven at Khorassin, so soft are the crimson and rose tints, and so velvety its texture. The players are clad in buff hose, and *just-au-corps* of dark cloth. A fair young page, his hand resting on the head of a greyhound, watches the game. A Venetian mirror of polished steel, set in ebony, hangs on the wall behind the gamblers. M. HARPIGNIES, always academically correct, marvellous in detail, and with a certain old-world charm, difficult to define, but essentially *sui generis*, contributes two landscapes, painted as carefully as an engineer's plan is drawn. The distance in one of these, bathed in the warm light of summer's evening, is exquisitely given. The sky has assumed a pale-orange hue, which is reflected in the pool in middle distance, and less in others, which appear here and there in the marshy ground, on the edge of which a poor cottage has been erected. The calm of nature has settled on the scene, in which we discern no trace of active life. Equally striking, as indicative of repose, is a figure JULES BRETON has painted as typical of rest after labour. A peasant woman, evidently a Bretonne, resting after a day of toil in the fields, is called *Repos*. Twilight has overtaken her; the sky is grey. A lingering sunbeam casts a quivering ray of light on the landscape. The woman's expression is resolute, but her attitude indicates fatigue. Her limbs are strongly defined beneath the folds of her heavy home-spun petticoat, and her hands and feet are superb in modelling. Full of life and play of colour, is M. BENASSIT's wounded duck. The movements of the bird in its last effort to fly at its foe are excellently rendered. Seldom have we seen a better bit of bird life.

Many good pictures must remain unnoticed. Some amongst them will be exhibited at the International Exhibition, which is to open on the 19th inst. under brilliant auspices. But we draw attention to two clever portraits in charcoal by M. BOETZEL, so delicate in execution it is difficult to credit that so rough a material was capable of producing such exquisite effects of shadow in half-light. In one instance the likeness is life-like, and in both the treatment of the head is successful.

#### WINTER EXHIBITIONS.

THE Royal Water-Colour Society has opened an exhibition which corresponds to the designation formerly given to the winter collection, but now omitted from the title-page of the catalogue, as consisting of "sketches and studies." Some rough designs in black and white have been admitted, notably certain spirited groups afterwards used in pictures by Sir JOHN GILBERT, the kind of thing which, as the Italians used to say, shows the artist's "hand." There are several painters in the gallery who impress far more by their outdoor sketches than by the more elaborate work of the studio. Mr. EYRE WALKER is an instance, whose sketch *Close of a Wet Day over Sherwood Forest* (58), with the sudden rush of golden glory firing rain clouds and drenched turf and wood, is one of the freshest and most masterly pieces of effect in the room. Mr. THORNE WAITE is also more happy in a crisp broad sketch like *Passing Showers* (142) than in the more ambitious scene with figures, the *Hayfield* (106). It should be noted, however, that not many men get an outdoor sketch of the scale of this last so well together. Amongst more poetic work is that of Mr. ALBERT GOODWIN, who sends several lovely Italian studies, delicately true, and having that peculiar quality of softened and bloomy colour which he appears sometimes to attain by the use of some specially prepared ground. Mr. GOODWIN sends also many studies of strange cloud form under dramatic accidental light and shade, and a study for one of his imaginative subject-pictures, *Through the Valley of the Sea*

(195). This artist has great skill in the use of opaque, which he shows to be compatible with the most ethereal truthfulness of atmospheric effect. Recently-elected members put in a brave appearance. Mr. C. GREGORY has a capital study of the river backs of a red brick *English Town* (107), in which he introduces a couple of foreground figures, and manages the rising perspectives of levels admirably. Mr. WILMOT PILSBURY is constant to his careful treatment of rural homesteads and quiet scenery, in which he embodies, not inaptly, the sentiment of TENNYSON's happily-expressed epithet, "homes of ancient peace." Mr. HOPKINS comes out stronger than before in two outdoor studies, *Trusted Friends* (165), a lot of anchors left to rust together on the grassy bank above the sea-beach; and *A Village on a Marsh* (224). Mr. S. J. HODSON sends a study of a tapestried chamber, where a little boy clammers into a big chair to look at his grandfather's portrait on the wall, and indulges in *A Boy's Day-dream* (90). There is not a better bit of work in the room than this, so free is the touch, so harmonious the colour, so well considered the whole thing.

Several of the older members are absent, but Mr. GLENNIE, one of the veterans of the Society, still sends his sunny Italian scenes; Mr. THOMAS DANBY is seen at especial advantage in eight drawings; Mr. BOYCE sends some genuine little sketches, not all of recent date; Mr. J. PARKER contributes abundantly and well; Mr. ALFRED HUNT has been in Northumberland, drawing at Warkworth; and Mr. HENRY WALLIS has travelled to Spain in search of sunshine, and found it, to judge by *The Moorish Fountain and Patio de Lindaraja at the Alhambra* (189). Among figure subjects the large study, by TOM LLOYD, of *Harvest Folk* (230) leaving the reaped fields as the moon rises, is beautiful in tone, and fills a large scale with simple and broad design. Mr. DU MAURIER and Miss CONSTANCE PHILLOTT may be welcome among newer associates, but are not likely to take the gallery by storm. A couple of large studies of *Poppies* and *Hollyhocks* (122, 123), by Mrs. ANGELL, show how the delicate manipulation which she applies to her small finished drawings is guided by the firm brush that has put in these blooms with such large freedom.

The honorary member, Herr ADOLF MENZEL, is more courteous in response to his electors than honorary members are wont to be, and has sent two drawings, a scene in *The Town Church at Innsbruck* (28), where a complacent preacher up aloft waxes eloquent from the gold and silver pulpit as the alms-bag goes round; and *Suspicion* (363), a study of a "ruffled gallant" listening, with upturned face, hand on sword-hilt, on a dark staircase. Opaque is freely used in both these drawings: the blacks are inky, and the tone rather dead; but of the splendid draughtsmanship and putting together there is no question. All the multifarious details and difficult perspective in the church scene at Innsbruck are managed after MENZEL's own masterly fashion; while the groups of peasants on foot and upper-class folk in pews are touched off with the satirical veracity of a chronicler of manners.

A last word must be given to note the screen devoted to studies and sketches by the late EDWARD DUNCAN, a tribute well accorded to an artist who helped to uphold the repute of the body through many long years of membership.

The proprietors of the *Graphic* some time since gave commissions to a number of artists to furnish for reproduction in their paper, by chromolithographic or other process, paintings illustrative of animals and their ways. The result—more than eighty oil pictures—is now shown in the Nelson Room of the Fine Art Society. The contributors are of various nationalities, and the worth of the works varies also. One or two great names stand against clever canvases—such as that of DE NEUVILLE against an episode of a soldier tending his lamed horse on a battlefield; Mrs. BUTLER against the study of *An Artillery Team in Action*, a broadly but rather crudely-painted little picture; while CATON WOODVILLE shows an officer, *Cruel to be Kind*, shooting a worn-out horse that has fallen on the snowy ascent. The best pictures of cats and kittens are undoubtedly the clever and sportive groups of Madame RONNER; while Mr. CHARLTON bears the bell for hunting dogs. Mr. BARTON BARBER combines in two good pictures the charms of childish beauty and of canine character under the titles, *A Mute Appeal* and *The Order of the Bath*. SAMUEL CARTER and ADRIEN MARIE undertake to paint the drolleries of the monkey tribe, and Mr. C. GREEN paints the cleverest



dog picture of the show, in his *Talented Troupe* of performing dogs and their audience, of which a water-colour version appeared in the last exhibition of the "Institute." On the whole, as illustrative of animal life generally, the exhibition is disappointing, some of the noblest types of dogs being omitted, and the motives of the subject pictures falling too much into lines of humour or pathos already worn threadbare by LANDSEER and his imitators. The pastoral groups are few and inferior, young Mr. CALDERON'S being about the best. We must not leave out the contribution of Mr. R. MACBETH, *The Veterinary's Shop*, wherein the incident of a fine lady holding her pet dog to have its hurt leg bandaged up is enhanced by costume, character, and picturesque surroundings.

### THE FIRES.

THE fire at Hampton Court Palace on Thursday is the latest addition to the remarkable fatalities which have occurred within less than a month. In Scotland and Ireland, as well as in England, buildings have been destroyed. Country mansions possessed of historic interest have suffered no less than houses of a humbler class, and the fire has not spared public buildings or churches. Two of the London fires indicate the danger attending modern cities, and, considering how much is involved, a Special Committee of the Institute of Architects might with advantage be appointed now to report upon the behaviour of the materials which were employed in constructing the Wood Street buildings and the Alhambra. It would also be advantageous to consider whether some improvement might not be adopted in the mode of construction ordinarily employed for buildings like those which have been lately destroyed. The short time which was needed to reduce large piles of buildings, and apparently well built, to rubbish, is enough to create disquietude among a great many of the owners of property in London. Most Londoners have the utmost confidence in the power of the fire brigade. But in the late fires, in Wood Street and Leicester Square, all that the best organised brigade in the world could do was to limit the area of destruction. There were no complaints uttered of delay in the arrival of help or of deficiency in the water supply, and on those occasions it is easy to make people dissatisfied; the wind was not unfavourable, and there was little difficulty in securing positions from whence to operate upon the flames. But although circumstances might be said to aid the brigade, the buildings were doomed from the first appearance of the fire.

In the case of the Alhambra the completeness of the destruction is especially remarkable, if it is remembered that the architect of the building has given much attention to the preservation of buildings from fire. The paper which Professor HAYTER LEWIS read at the Conference of Architects in 1871 is enough to show that for many years he made a special study of the action of fire on materials, being well aware that in building science failures are always instructive. We may assume, therefore, that if anything was left undone which would have made the Alhambra secure, it was not owing to an oversight on the part of Professor LEWIS. And this leads us to consider one of the chief causes of the destruction of buildings.

Now we have no hesitation in saying that what contributes most to the existence of buildings which cannot withstand a fire is a false notion of economy on the part of the proprietors. A building which has any pretence to be considered "fire-proof" is necessarily more expensive than one in which there is no provision against danger. It is not a question of skill, but of outlay. Building owners, speaking generally, will not sanction the additional expense by which so much safety can be ensured. They prefer to run the chance of fire, or, in other words, they assign the risk to the insurance companies. Unfortunately for good building the companies are too ready to undertake the risk. The competition between offices is so keen that much will be done to attract clients, and in the scramble for business buildings of all classes are too often confounded together. The notion prevails in offices that by taking a certain number of years an average may be struck, and that since loss is inevitable, there are times when it is useless to be over-particular in investigations. If buildings were fully fireproof there would be no necessity for insuring; the very existence of companies is dependant upon the probability that there is weakness in the most careful construction when it has to be tried in the fire. Let the insurance offices be more stringent in the assessing of hazardous structures; let allow-

ance be always made when precautions have been taken to diminish risk, and we should find a decrease in the number of insecure buildings. There is little surprise when such a building as the Alhambra is burnt, for flimsiness is in the public mind generally associated with theatres, and heretofore the authorities did little for the protection of playgoers. But the Wood Street warehouses are in a different category. In such cases, although the value of buildings and stock may be covered by the insurance, there is a loss which cannot be recouped. The temporary suspension of business drives customers to other houses, and there is no certainty that they can be brought back again. It is said that one of the Wood Street firms will in this way suffer a loss of 100,000/ on the spring trade alone. A danger of this kind might be supposed to suggest itself when the large warehouses in Wood Street were about to be erected. But if it did, no means appear to have been adopted to provide for the contingency. If the floors had been constructed of concrete, and if the ironwork had been protected by the same material, the loss must have been minimised. The Haymarket Co-operative Store owes its safety to the concrete which covered the beams and columns, and what has been efficacious in the West of London is not likely to be a failure in the City.

### GLOUCESTER CATHEDRAL AND ITS ARTISTIC CHARACTERISTICS.\*

THE estimates of anything from an artist's point of view are apt to be as various as the minds that make them, and commonly share the same fate in their reception, being either coloured or limited by every variety of taste, opinion, or capacity. A naturally good taste, helped by a congenial spirit and occupations, is a pleasant possession, but it is a better guide to begin with than to end with, for fine art is a deep well to draw from; it covers a wide space, it penetrates far below the surface of things, and it appeals to a wide range of sympathies, embracing subjects near akin to science and poetry, philosophy and religion. It is this last that has most to do with the arts which have combined to produce these sacred buildings, where architecture, consecrated to its highest purpose, has appropriated from every art beside all such elements of religious expression as could contribute to its own completeness. Thus was this great Abbey of St. Peter once complete, as it stood in the fulness of its beauty, its pride of beauty; but troublous times have intervened and left a wreck. Those who have read the history of such establishments as this have sickened at the repetition of wreck and ruin which has been their fate; devastations by fire and sword, by the irruption of hostile and Pagan tribes, reducing the monasteries and churches to ashes, Christianity itself being all but extinguished; and what is yet more painful, the fitful wantonness of our own people, whose passions, once aroused, have been like the bursting of a pent-up storm which seems to revel in ruin. Such was the impulse which now above three hundred years ago swept down, in succeeding tides of desolation, those monuments which, during past centuries, the highest culture, poetry, and religion had produced. Those who raised the storm had their reasons; some high-minded and pure, some base and contemptible; but not so the multitude, for a mob is not actuated by the refinements of religious opinion. It was no nice perception of varieties of faith that aroused their ignorant fanaticism. They had no thought nor wish to change an item of their creed; but it was the resentment of a discontented multitude, discontented, not with their religion, but with their oppressed condition, utilised by the partisans of politics and religion, goaded on by its own sense of injury, injustice, and suffering, and fanned into a flame of destruction by any pretext that could serve the purpose of its unreasoning vengeance. The Church had lorded it over much; its exactions and its presumption had often pressed hard upon the people. So the day of retribution came; and, as usual, where blind ignorance took part, reform was ruin, and the loss irreparable; and here in this that once was among the richest and most beautiful of national monuments bare walls remained, and all that had clothed them with life was no more.

#### *The First Abbey at Gloucester.*

It had been under happier auspices, and in days of a purer faith, now just twelve hundred years ago, that the first Abbey of St. Peter at Gloucester had its beginning. It was founded and endowed by Kings, and Royal dames were its first abbesses. Its buildings stood near those around us. On the north side of the choir of the present Cathedral, and next to the high altar, is a monument known as that of the Viceroy Osric, the noble-born friend of Ethelred, the second Christian King of Mercia, by whose authority he founded this Abbey. This monument is the tribute of the last Abbot to the

\* A paper read by Mr. T. Gambier Parry at the meeting of the Gloucester Cathedral Society, and reported in the *Gloucester Chronicle*.



man who, eight hundred years before, had laid the first stone of the first Abbey of St. Peter. The recumbent figure holds the model of a church, which is interesting as a piece of archaeological reverence on the part of a sixteenth-century Abbot; for the character of its façade, roof, and tower is of the earliest type of Norman work, or even before it. The figure, unworthy of the Royal name it bears, is such that the Puritan iconoclast, dealing ruin right and left, passed it by with a smile, that the very ugliness of such a "graven image" saved him the trouble of breaking it. At the time of the foundation of this Abbey (A.D. 681) society was so broken, and private life so harassed by the disturbance of lawlessness and war, that as Christianity was fast spreading and arousing in men's minds aspirations for a better mode of life, for which no peace was found in their precarious homes, establishments were founded as refuges from the noise and storm around them, and as centres of religious life. Such were those of St. Hilda in the north, or St. Ethelburga in the east, and of Osric in our south-western Gloucester. But within a century the troubles prevailed, and war with all its vice and tumult occupied the ground, and the years of the first Abbey of St. Peter were numbered. Never were the first fair blossoms of the early year more mercilessly withered by the biting winds of spring than were those first fair homes of peaceful life and charity ruined by the violence that marks their chequered history. So ends the first age of our Abbey. Its inhabitants were terrified, scattered, lost; and of their place and buildings not even the tradition of a memory remains. We may yet, however, form a fair idea of them, for it must be remembered that no art is isolated; it comes of that which was before, and hands on its lamp of life to those which follow it. The character of all buildings in all countries has of course depended first on climate and then on the nature of the materials at hand, and the ability of the people. All round Gloucester in those early days were vast forests, on one side covering the great part of what is now Worcestershire, on the other side the wide range of our Forest Deanery; and yet nearer, the picturesque outline of what we still know as the Hill of Robin's Wood; and just over Severn, but close at hand, where the aged oak of Lassington and the Higham chestnut tree link our degenerate woodlands with the heroes of primeval forest. Such then was the wealth of building material, as easily got as the stubborn oak would yield to the axe, and as cheaply as the Severn boats and rafts would bring it; and the builder of the first Abbey of St. Peter fetched it home, as Chaucer describes one in the Miller's tale:

"I trow that he is sente  
For timbre, that our Abbot hath him sent."

There is still, in that once forest land of Cheshire, a fine example of the timber buildings of early times in the church at Warburton, where the piers and arches of the nave are formed of large oak trees cut in half lengthways, based on stone blocks, and, joining their curved forms above, produce the arcades on which the whole superstructure is borne. A timber-arch still marks the place of the north-west doorway, and the chancel is of similar construction. Time and trouble have left us few examples; but there are so many valid grounds on which to formulate our ideas that it needs but little stretch of imagination to rebuild the first Abbey of St. Peter. Like the first great church on the wild island of Lindisfarne, it might have been built with wood, and thatched with reeds. Its aisles may have been arched with oak like those at Warburton; and its tower like that near at hand at Upleadon, where the long upright oaken timbers, with white panels between them, are like those which Holinshed admired in the buildings of old England which "are commonlie so strong and well timbered that there are not above foure or six or nine inches between stud and stud." Thus may we easily imagine that group of monastic buildings, bright with the contrast of dark oak and white panelling, with its long cloistral enclosure, and all the apartments for refectory, dormitory, and guest-house, with its church and its tower rising above them, on a site chosen for its quietude, on the further side of what was then the sparkling stream of the Twyver, whose banks, covered with willows and alder trees, separated it from the town; an ancient town, whose British and old Roman buildings, picturesquely mixed together, with the Severn rolling beneath them, with smiling meadows all around it, and the background of the beechy Cotteswolds, had won for it the title of "the Fair City" (*Caer Glouwe*). Such might have been, and probably was, the pleasant scene that presented itself when, just 1,200 years ago, King Ethelred came to visit his brother Wolfere's widow, or the sister of his friend Osric—Kymberga, the first Abbess, whose name, modernised into Kymbrose, is still familiar to the poor of Gloucester. There is yet, however, another picture that we could draw, by no means so likely to be true; but to illustrate the state of the arts in England at that time, and particularly of such as might have been found at Gloucester, it may be as well to take it. If the age had been dark, it certainly had been of all things darkest in relation to the arts; but before the foundation of this abbey the day of their revival had risen. From Iona to Canterbury Christianity was the dominant religion. It spread as an element of light and peace, and the under-current of its influence prevailed. Men woke to the horror of the crime around them. An ideal altogether new was introduced into their life. The reality instead

of the mere superstition of spiritual existence was forced upon them. The conviction weighed heavily on many minds. Men craved for quietude, and yearned to escape from a life they had learnt to hate. A new light had dawned upon them, and with it a sense of the beauty of that light. It awoke their dormant faculties of mind, heart, and imagination, and opened a fresh vista to the purpose and direction of their lives. Monastic life afforded the only refuge. Monasteries were the homes not only of religion but of learning, and then the arts came in to minister to them both; and thus their spark was kindled. Some years before that time two men had come upon the scene whose enthusiasm fanned that spark into a flame. St. Wilfrid and his friend Benedict Biscop had learnt what art was among the grand relics of the South, and had returned from years spent in Italy and Gaul, not only to introduce the customs of the Roman Church among his old British fellow-Christians of the north, but to build them churches, till then unthought of, with finished masonry, with lead for roofing, and glass for windows. Their story has been too often told for me to repeat it here, or do more than to remind you how they had brought with them from France and Italy artists and workmen to revive the art of building, and to teach the English the mysteries of painting and making glass; and how they founded monasteries and built churches, adorned with pictures and relics, service books, sacred vessels, and embroidery.

#### *Early Christian Churches.*

The earliest Christian churches of the south appear to have been constructed with the three clearly-marked divisions of the sanctuary, nave (with or without aisles), and narthex, for the ministry, the congregation, and the catechumens. Among the most interesting relics that time and revolution have spared is the underground church built by St. Wilfrid at Hexham. It was built about ten years before the foundation of the Abbey at Gloucester, and is a complete model of the early Christian churches, with a chancel, a nave with aisles, and a narthex opening to the staircase which leads down to it, denuded of course of all that may have once embellished it, of small dimensions, but in perfect preservation, constructed of materials which seem to tell the tale of their origin in the great wall of Hadrian, which is near at hand. But before the building of this crypt, and about twelve years before Osric began his work at Gloucester, St. Wilfrid had built a church at Ripon, about which Leland quotes this glowing description from Eddius, that it was "a basilica constructed of wrought stones from the foundation, and divers pillars and porticos formed part of its arrangement." This church was dedicated to St. Peter in the presence of Kings Egfrid and Elwin. An underground chapel still remains of Wilfrid's work at Ripon.

#### *The True Founder at Gloucester.*

To return to Gloucester. If we are to accept the document given by Dugdale, Wolfere the King, and not his brother and successor Ethelred, was the real founder of this Abbey. Gloucester had but lately been added to his kingdom of Mercia, and he is there stated to have enlarged and beautified the town of Gloucester and laid the foundation of the Abbey. Laying the foundation may simply mean the assignment of lands for the establishment of the Abbey. Then his brother and successor took up the work, and hence his charter of foundation to Osric. But Wolfere had been at Ripon, and must have seen Wilfrid's great church there. The bias of Ethelred's character was to peace, to the arts of peace, and to a religious life, as shown by the end he chose for it; for, after thirty years spent in the weary work of ruling, he retired to the Monastery of Bardley, among the fens of Lincoln, and there died. St. Wilfrid had been his intimate friend and his guest at Bardley, and it is a fair inference that the works as well as the character of such a man must have exercised strong influence on a mind so entirely sympathetic as that of King Ethelred. It is also fair to infer that Gloucester must have occupied a prominent place in the mind of the whole royal family from the facts just mentioned about its foundation, from Wolfere's widow being its second abbess, and, further, that the succeeding king and his friend Offa, king of the East Saxons, were among the number of its benefactors. All this points but one way. I have no wish to exaggerate the supposition, which can only be based on inference; but Gloucester evidently held no common place among the noblest and wealthiest of the land, who had thus centred their interest and influence upon it. Once more, and I leave it in your hands. Builders have been always reckless pilferers, and at these times no such idea as the sacredness of antiquity had entered their heads. Gloucester had been a Roman city—a wealthy one, with every building required for its commercial, military, and religious establishments. But these were then in ruins, and we may rightly fancy their massive sides and angles, like the great buttressed walls and nooks of many a mediæval cathedral, covered and filled in with hives of houses piled up against them for support and shelter. But those mines of building stone were used for other purposes, as badly or as well as the world may think it; and just as the first subterranean church at Hexham was built of the pilfered ruins of Hadrian's wall, so might the first church of St. Peter at Gloucester have owed its building materials to the wrecks of the walls, the Pretorium, the Forum, and the Temples, of which we now trace the foundation, the mosaics, and the bases of their ruined architecture.



*Bishop Wolstan and Gloucester.*

However that might have been, little occurred to affect the architecture of those buildings till the beginning of the eleventh century. I am not concerned here upon the history of the Abbey, interesting as it is in all respects, except as regards the story of the arts which have been associated with its building; otherwise there would be much to say here, and subsequently also much that for consistency sake I must omit. The really important change in the circumstances of the place, in those early days, occurred when, under Bishop Wolstan of Worcester, in A.D. 1022, it was changed from an establishment for secular clergy to a monastery under the rule of St. Benedict. The bishop found the church richly endowed, two of the Mercian kings having been, a few centuries before, its benefactors. The place was so important and the opportunity so great that he took the bold course of reconstituting the whole establishment, and of consecrating it afresh under the new title of St. Peter and St. Paul. I am well aware how often in ancient chronicles larger establishments than this at Gloucester are described as having a *lignea basilica*; and smaller ones as being, in plain English, built of wattle and dab and roofed with straw. But at the time I am speaking of stone was used in building quite small churches, such as the one still nearly perfect at Bradford-on-Avon; and stone was then also used where in some places it would have to be brought from a distance, as at Deerhurst. Here at Gloucester all sorts of stone was easily obtained. The herring-bone masonry at Ashleworth and the reticulated work on the chancel at Dymock may be possibly of that period. On such an occasion as I was describing, some change in this building almost of necessity occurred, and we might then have seen rising above Bishop Wolstan's church a tower of that peculiar style that was then in vogue, marked by its masonry of long and short stones alternately, and even more marked still by the long narrow strips of stone, slightly relieved from the rubble surface of the walls, and dividing them into long upright panels, the divisions of the stories of the tower being also marked by horizontal strips of the same sort, and the angle-headed window-openings formed also of two short pieces leaning against each other. It is easy to trace many features of the marble architecture of Greece and the Lycian monuments to the wooden construction out of which they had grown; and here in Anglo-Saxon times we find when stone was used for walls the principal features both of construction and ornament were derived from the wooded framework, with its white wattled panels between, which had been the primitive style of the country; and further on still we may perhaps be allowed to trace, from those long flat strips of stone, the tall, thin, and plaster-like projections, which constantly divide in a similar manner the façades of Romanesque and Norman buildings, all having their distant origin in the oak building of former days. Such, in the year 1022, may have been the tower of the newly-constructed abbey on the banks of the Twyver.

*Bishop Ealdred and the Abbey.*

But the great change was yet to come. A subsequent bishop, a man of great ability and ambition, formed the scheme of a still more important establishment. His name was Ealdred, to whose lot it fell to crown both Harold and William of Normandy. He was not a man to do small things. His vigour may be inferred from the remonstrance he addressed to William the Conqueror, which brought the Conqueror on his knees before him, in presence of his court, on the floor of Westminster Abbey. He held for some years the sees of Hereford and Worcester, including the present diocese of Gloucester, and he subsequently became Archbishop of York. If he and Wolsey could have interchanged their dates of birth, he might have played the part of Wolsey. This man, recognising the importance of the opportunity, acted on his resolve, and laid out a great scheme for the future Abbey nearer to the city. The sites almost invariably chosen for monasteries had been solitudes of sea coast, forest, or fen; and in course of time the cottages of their dependents so accumulated as to change their solitude to a city. But here at Gloucester the city existed close at hand. The original monastery of St. Kymburga had chosen its site in a quiet place, beyond the Roman wall, among the groves of alder trees, which stretched upwards from that island of the Severn which from them still holds its ancient name of Al-ney. But now the opportunity occurred for the foundation of an important establishment, capable of service both for its own inmates and for the city. He chose the new site and there he built it. According to Abbot Frocester's history this remarkable man was consecrated Bishop of Worcester in 1058, *i.e.* eight years before the Norman Conquest, and it records that he constructed the Abbey church *de novo* from its foundation, and rededicated it according to its original title of St. Peter's.

*Abbot Serlo and the present Cathedral.*

The next we hear of any building is in the time of the first Norman abbot, Serlo; and of that work we only learn that the first stone of the *Glevornensis ecclesia* (the Gloucester Church) was laid in 1089, twelve years after the Conquest, and was consecrated with great pomp in 1100. Thus the great Abbey of which the bulk now stands was completed. It had been a gigantic undertaking; and we can easily imagine the workmen sitting down

within the western wall to contemplate their finished work. They saw before them the vista of a grand arcade, on massive piers, and in the distance closed by an apse behind the high altar, and covered in from end to end by a flat ceiling of wood, panelled and painted, as the fashion was. Right and left along the nave and choir, and all round the apse, vaulted aisles added to the grandeur of effect; beyond the choir were three chapels with groined roofs, and apses round their altars; and at the opening of the choir, north and south, were transepts, with chapels projected from them eastwards. In the centre, where the four great arms of the building met, rose a tower which might have been of wood, otherwise it probably was like that on Osric's tomb, with an interior arcade, and open like a lantern to the church below, as that of Tewkesbury was in Norman times. All round above the aisles of the choir was a spacious groined triforium, with chapel for chapel and altar as below; and beneath them all a lower church (now mis-called the crypt), with chapels, aisles, and groins, and altars repeating all that was above. Nor was this nearly all, for that was but the huge shell which enclosed the finer things of sculpture and glass, embroidering and metal work. But time would fail to tell of all outside, the transept towers, deep doorways richly carved, the great chapter-room, and the gloomy passage of the slype, with its long arcade leading out to the burial-ground; and all this vast and varied work of one style throughout, complete and beautiful in its unbroken unity. Those workmen may well have looked with awe on this gigantic product of their hands. The foundation for it would alone have been a thing for giants. But was all this work really theirs? Had the short term of eleven years sufficed to devise, to organise, to finish, such a work as that—to collect its mountain of materials, with all the painful strain of transport to overcome, and all the rudeness of their machinery? As they sat there weary beneath its shade, had they in that short space of fleeting years shaped and finished such a work as this? If I had been one of those who had to answer, I should have answered "No." In that group of workmen there sat one who was a master among them, a man of some age and evident intelligence. A young monk of the Priory of Tewkesbury, but lately come to Gloucester, joined them, and asked many questions about the building; so the old mason told him this story.

*A Mason's Story.*

He said: "I am a native of Deerhurst. My father was a builder there, and he sent me to the Monks' School at the Priory. I saw a great deal of building work under my father, for he did all the work for the Priory, and when the rich Earl Odda built a Royal Hall close by the old church of the Priory, my father built it for him. There was a very busy bishop at Worcester then; his name was Ealdred; he was a great friend of the Earl's, and came and blessed his new buildings for him. But the biggest place the Bishop had to do with was here at Gloucester! and King Edward (God bless him) was often here; for the place is a strong one, with that old wall and the castle down by the Severn, and the marshes out beyond; and there's a sight of business done by the boats that come up from the sea. So King Edward liked the place; and the Bishop, who was always wide awake to business (so he's got made Archbishop of York now), used often to come here; for the King liked all Church work and buildings and so forth, and had a number of Frenchmen about him; and as the Bishop was a great traveller, they got on very well together. The first time the Bishop came to Gloucester he brought me with him from Deerhurst, for he knew the Abbey here was in a poor way, and that I had a good knowledge of building and all that from my father. We found the place in a bad state; and the Bishop thought to please the King, and to get the King to help him, if he tried to build a large church like what the King was building then near London. So the Bishop and I talked it over; and the new Abbot here, Wilstan, he too thought to please the King, so we worked together and laid out a place for it, close to where the old Roman wall was, so as to make it the chief Church of the city; with the Abbey buildings snug and quiet on the other side. The Bishop had been in France and had seen all that was doing there; but he said it would be no use putting our English men to work like that, but to build strong and simple work like what our folk could do best. So we struck out the plan on the ground, and I was frightened when I saw how big the Bishop meant to build it, and I told him he'd never do it. So he set me over the work, and I got a lot of men and things together, and we began at the east end, and there the under-croft was built, with low vaults, and large blocks of masonry to carry those above. Against them we built small columns to carry the groins. There were some small columns in the old ruined place close by; so we put them in the middle, under where the high altar was to be; they were like some I remember among the old Priory buildings at Deerhurst. So we got on, and put up the piers of the choir—those big rounded ones that you see out there round the altar, such as our men could do, for they didn't like the sort the Bishop wanted, which was the French way of work, large square ones with lots of angles and notches and little shafts in them, which our folk weren't accustomed to. So we worked in our own way, and after some years we got the choir all done, and ceiled it over flat with boards. Outside the church we built the slype leading out to the burial ground, and we ceiled it plain like the under-croft; and we built a long wall where



the cloisters were to be, which is now the prior's garden. There was an arch in that wall which opened into the slype, and two others into the Chapter House, which was a very large room built of wood, where good King Edward used to meet his Witan most years in winter time. And there was a long dormitory over the slype, which was built of wood too, but all those wooden buildings were burnt down. We were at work at the cross transepts at the same time, for the King was building his big church near London on a plan like a cross, which was quite new to us; and the Bishop here, thinking to make a fine thing and to please the King, was set on making his new church like the King's. We got on with the transepts, and built part of their east walls and the chapels in them; but we never got any further, for the Bishop was always about the Court, and liked to have all the nobles about him, and he spent his money too fast with them. As soon as we got the choir ceiled he got the King's friends about him, and the Abbots of Malvern and Pershore, and the Priors of Tewkesbury and Deerhurst, and many more, and there was a great feast, and he blessed the new church in the name of St. Peter. But he left us then, for the King was so pleased with him that he had him made Archbishop of York; and he stopped all the work here by seizing three or four parishes about here to pay himself back for what he had spent, so there was no money to pay the men. And then the good King died, and the men went away to fight under King Harold, for they didn't want the French Duke William. So the place was left not half done, and so it remained for many years. But what grieved me most was that by that bishop's way of living, and the cost of that great building, and his taking away the worth of those fine parishes from the abbot here, the place was ruined; and the poor monks went away, for they had no means of living here any more; and Abbot Wiltan, with his heart nearly broken, left us and went to Jerusalem and died. So all our work was left to go to chance. After that things were changed a good deal in England, and our old bishop went from York and crowned the Frenchman King of England in good King Edward's own church, down by the Thames at Thorney. After brave King Harold's death some of our masons went to work for the French at Dover Castle, but I stayed here and did work at St. Oswald's Priory close by and St. Kyneburg's up in the town. Some six years after that we had a Frenchman made abbot here, one Serlo, who had been an abbot before in France; and when he came here he found the place very poor, for Bishop Aldred had ruined it, and there were only two old monks and a few boys left in the place. But the choir and all that we had done pleased him much; and he sent for me, as I knew all about it, and I went over it all with him. It was all sound but the groining of the under-croft, which had cracked, for we had had bad lime for mortar, and for many years there was no one here to care about it. But he was pleased at Bishop Aldred's plan, and as the choir part for the monks was done he took to the nave, as Bishop Aldred had laid it out, and he ordered me to see to the building of it as a great church\* for the town people, and he got the Bishop of Hereford here to lay the first stone of this work. But there was an earthquake that year, which made our old work in the under-croft all the worse; so some while afterwards he made us underbuild it with strong piers and arches, as you can see if you go down there. Many of our men soon came back, and the French abbot wanted them to build as they do in France; but our men didn't take to it; so we went on the same plan with those big piers as in Bishop Aldred's choir, only taller. But the Frenchman was not satisfied with our plain work; so we got stone carvers here, and all the arches were carved as you see, and the mouldings above too, and the groings of the new aisles are carved, and all the work we did for him looks richer than any we did before; but the masonry looks the same, for the same men did the best part of it. And the French abbot was so fond of rich work that when we put in the strong groins down in the under-croft he had them carved too; and there is a chapel down there on the right near the east end that he had made very rich with little shafts and arches; we could only put them up there by standing them out against the old work, and these were carved too. You'll always know the work we did for him, for he was never pleased without some rich work somewhere about; and we finished the transepts and the tower, and finished it above with a wooden steeple, and we built the new Chapter House just where the old one was burnt, and put little arches, all richly cut and carved, along the sides of it; but you'll never find one scrap of our old work with anything like that upon it, or anything else but strong and plain. The last thing we did was the flat ceiling all along, and some Frenchmen came and painted it in squares and patterns, black and white. And now we've done it all, and to-morrow we shall have four bishops here to open the church to the people and bless it. Your old Priory at Tewkesbury is in a poor plight, and, if ever your prior there wants men, he'd better give us the work, and we'll put it up strong for him like this; that is what our men can do, for it's the English way of work." So ended the old mason's story, and all the group dispersed.

(To be continued.)

\* In Abbot Frocester's History this building is described as the *Glewormensis Ecclesia*.

## ANCIENT GREEK PAINTING.

IN his third lecture on "Ancient Greek Painting" at University College, Mr. Newton treated of the painters who flourished in the reign of Alexander the Great and his immediate successors. Among these Apelles was pre-eminent, not only on account of his great talents, but because of the conspicuous position he occupied at the courts of Philip of Macedon and Alexander the Great. He was the pupil of Ephesus, the Ephesian, and also of Pamphilus, and after this double training, first in the Asiatic and then in the Sicyonian school, attained a technical perfection which embraced the excellencies of the greatest masters, his contemporaries or predecessors, surpassing them in the combination of these qualities. He made many portraits of Philip and Alexander. The latter is said to have forbidden anyone else to paint his likeness. Some of these portraits of Alexander were of an ideal character. In the temple of Diana at Ephesus was a picture in which Alexander was represented wielding a thunderbolt, which, with the king's hand, seemed to stand out from the panel. Of this picture it was said that it represented the invincible Alexander painted by the inimitable Apelles. In another composition Alexander was grouped with the Dioscuri and Victory, and in a companion group Apelles painted the king in a triumphal car with War following him bound as a captive. After this picture was taken to Rome the Emperor Claudius cut out the head of Alexander and substituted that of Augustus. Other portraits by Apelles, such as those of Clitus, Antigonus, Neoptolemus, were probably treated in a more realistic manner. By common consent of antiquity the *Venus Rising from the Sea*, by Apelles, was adjudged to be his greatest work. This was originally dedicated in the temple of Æsculapius at Cos, but was afterwards taken to Rome by Augustus. Another work by Apelles was the allegorical composition in which he represented Slander, personified by a female figure, and combined with other personifications, such as Ignorance, Suspicion, Envy, Conspiracy, Deceit, and Remorse looking back towards Truth. It had been inferred from Lucian's description that this composition was a product of the reason rather than of the imagination, but the subject may have been treated in a very noble and impressive manner. What seemed to have distinguished the works of Apelles from those of all the other great masters of his time was their grace and charm. This he claimed for himself as his special merit. He himself admitted that he was inferior to his contemporary Melanthios in composition, and to another contemporary, Asclepiodorus, in aerial perspective. It was, perhaps, for this reason that he does not seem to have produced historical pictures with many figures. Pliny attributed to Apelles the invention of a kind of varnish by which the brilliancy of colours was tempered and harmonised. For such a purpose painters would now use glazes, but it was not clear how the same result was arrived at by a varnish which, according to Pliny, was made of burnt ivory. Several interesting anecdotes were preserved of Apelles, which showed that his success did not lead to the boastful arrogance which is so conspicuous in Zeuxis and Parrhasius. He manifested a generous appreciation of the merits of his contemporary Protogenes, and brought him into notice by offering a large price for his works when that painter was living in comparative obscurity at Rhodes. Protogenes finished his works with an elaborate minuteness, reminding us of Albert Dürer. They had, in the judgment of Apelles, but one fault—they were deficient in grace. Of the pictures by Protogenes, the titles of very few had been handed down to us. The two most celebrated were those of Ialysos, a Rhodian hero, and his Satyr reposing, which was painted during the siege of Rhodes by Demetrios. He was said to have laid four successive layers of colour on the Ialysos, and to have spent eleven years over it. Of the other painters contemporary with Apelles, the most celebrated are Aetion, whose picture of the marriage of Alexander and Roxana is described by Lucian; and Theon, who painted mythical subjects, and is described by Quintilian as an imaginative painter. Antiphilos, the rival and enemy of Apelles, painted not only mythical and historical subjects, but also caricatures, and was not admitted by ancient critics among the artists of the first rank. Peiraiikos in the same period excelled in subjects of *genre*, such as barbers' shops. Timomachos, whom Brunn places in the period of the successors of Alexander, though, according to Pliny, he lived in the time of Julius Cæsar, painted three celebrated subjects in ancient tragedy—Medea about to slay her children, Ajax, and Orestes with Iphigenia.

Professor Newton's fourth lecture at University College on Greek painting dealt with the paintings on Greek fictile vases from the earliest period till the close of the second century B.C., when the art of ceramography probably ceased to be practised. The lecture was illustrated by many drawings of vases of all periods, of which the earliest specimens were from the islands of Rhodes and Melos. In the archaic stage of ceramographic art the style of drawing probably approximated very nearly to that of the contemporary paintings on walls and other surfaces, and this similarity of style must have prevailed as late as the time of Polynotos. The lecturer exhibited drawings of the celebrated cup, formerly belonging to Mr. Bale, and of the equally-admired cup from Camirus, discovered by Mr. Biliotti. On the former of these cups is a group of Athene, Pandora, Hermes; on the latter, Aphrodite riding on a



swan. Both these designs are painted in several colours on a white ground, and are remarkable for the beauty of the drawing, which presents characteristics such as we may conceive to have belonged to the school of Polygnotus. After the improvements in chiaroscuro and aerial perspective, introduced by Apollodorus and Agatharcus, and perfected by Zeuxis and Parrhasius, it is obvious that the line of demarcation between painting and the subordinate art of ceramography became much more strongly marked. The vases which were produced in the best period of Greek painting do not attempt to imitate the effects of light on colour which were accomplished by the great masters, their contemporaries. The vase painters never lost sight of the technical conditions of ceramography, and, while observing faithfully these conditions, they produced designs which for decorative fitness and beauty have never been surpassed. In these designs the shape of the vase determines and controls the composition. Thus in the tall *amphora* from Nola and Vulci the narrow field of the picture seldom contains more than two figures, and the outlines of those figures are generally kept very distinct, foreshortening and complicated grouping being avoided. The colouring is nearly monochrome; the natural red colour of the clay is used for the figures except in the case of the Athenian *lekkythi*, on which the figures are polychrome on a white ground. From the time of Alexander onwards the character of ceramography changes. The shapes of the vases are less refined; they are often on a much larger scale. In the pictures compositions of many figures are often crowded in, without due regard to the relation between the shape of the vase and the design with which it is decorated. The colouring is often polychrome, gilding is introduced, and sometimes the principal figure is painted white, the others being left the natural red colour of the clay. The lecturer illustrated these remarks by a drawing of a beautiful vase from Rhodes, representing the surprise of Thetis by Peleus on the seashore. Thetis herself and Eros are painted white and the wings of Eros blue. Admirable as the drawing of these figures is, the innovations in ceramography which it exhibits must be regarded as the beginning of a decadence which in the later vases after Alexander shows itself in the careless drawing and in a certain effeminacy in the choice and treatment of subjects. The finest vases of this later period are those from Kertch, in the Museum at St. Petersburg, and those from Ruvo, in Southern Italy. On a survey of the subjects of vase-pictures through the successive centuries during which ceramography was practised, we find that, on the first introduction of the human figure in the design, mythic personages engaged in war or the chase predominate; as the art advances, gymnastic and agonistic subjects and scenes from real life become more common; and after Alexander's time we find compositions in which Dionysius, Eros, and Aphrodite play a leading part, also scenes representing mourners at a tomb, and a few compositions of many figures which may be adaptations of the designs of great masters.

### THE ROYAL ACADEMY.

ON Saturday evening Sir Frederick Leighton distributed the prizes and medals awarded to students in the Royal Academy Schools for paintings, drawings, and models submitted in various competitions this year. The ceremony took place in the lecture-room, which was filled with students and their friends.

The President said: Although it is only in alternate years that your attention is asked to an address from the chair, it seems, nevertheless, desirable that you should learn at each distribution of prizes, if only in a few brief words, what is the general impression made on our minds by the competition of the year as a whole, inasmuch as the mere award of a limited number of prizes does no more than single out certain individual works of especial merit, and conveys no information on this head. Well, I am very happy to be able to tell you that in every class, except, perhaps, one, the general impression this year is a distinctly gratifying one to those who watch anxiously the working of these schools—that is to say, to one and all of us—for, whereas the average of merit is not inferior to that of other years, we have in three several competitions felt justified in offering an additional award. The first of these competitions is that for the Creswick prize, in which several works are of considerable merit. The prize itself being definitely limited by the bequest, could not, of course, be doubled. We have therefore resorted to a *proximè accessit* in the case of the second best work in the competition. The next additional award takes the shape of a second medal in the unusually large competition for the cartoons of a draped figure, while the other is a third medal in the class of architectural drawings from an existing building—a class in which the competition is of marked excellence. Of the other competitions the most remarkable is that of a set of six drawings from the life—a competition which has fully deserved the three prizes given in it. The paintings of a figure from the life are not, I think, beyond the average in merit, and I regret that they are not more numerous, but the large scale of several of the studies is much to be commended. I cannot too strongly impress upon you again, as I have on former occasions, the great value and importance of carrying out your studies on a large scale. Whatever the scale on which it is your intention eventually to work, you will

always be gainers by studying in the first instance on a large scale. The competition in sculpture shows marked signs of the benefit of our new school, but the satisfaction I feel in making this announcement is sadly marred by the thought that the gifted youth to whom the second award has fallen has been stricken down by death on the very threshold of a bright career. David Wade has ceased to live, and a wreath of *immortelles* hung before his successful work is a token of the respect and sorrow of his young fellow-students—a feeling in which we, his older brother artists, warmly and heartily join. A prize has been given also in the class of designs for a fresco for the decoration of a public building, but I regret to say that I have not yet the much desired satisfaction of seeing one which would justify the higher honour of execution under the auspices and at the expense of the Royal Academy. Very few things would give me more sincere personal pleasure than to announce such an award from this place, and I hope you will not long withhold that pleasure from me. I spoke just now of one competition in which the average is not fully reached, I alluded to that for the Armitage prize, in which the drawings have fallen below the standard we expected of you; and I regret this shortcoming the more on account of the importance of the qualities this prize is chiefly founded to develop. I mean the qualities of dignity and style in form and composition. Now these qualities are much wanting in the designs sent in, and, indeed, the lack of these qualities is the dominant impression left in my mind by all the designed work in this year's competitions. It is that want which is felt in the design for a fresco, and careful, meritorious, and good in other ways, as are the cartoons of a draped figure, they, nevertheless, lack that style, that nobility of form, and that elevation of character which the subject given imperatively demands. This is not the time to dwell at any length on this point, yet I could not but allude to it, and I must earnestly beg you to pursue it for yourselves. To aid you in that pursuit, I will, in conclusion, urge you to study with unwearied admiration the works of the greatest master of style this country has known—the works of John Flaxman.

Mr. F. A. Eaton, Secretary, then called up the successful students to receive the prizes and medals at the hands of the President. First to come was Mr. R. O. Rickatson, the winner of the Creswick prize (30*l.*) for a landscape painting—a scene of quiet restful beauty, with an old gabled farmhouse standing in deep shadow, as the last pale rays of daylight streaming through a rift in grey clouds pour “on dewy pastures, dewy trees,” and are mirrored in a placid, sedge-bordered pool. Mr. Herbert Lyndon was *proximè accessit* in this competition. Mr. William Carter, son of the well-known animal painter, came next, and returned again and again to the dais, his success having been, if not unprecedented, at least extraordinary. He had won four first places, gaining silver medals in the several competitions for the painting of a figure from the life, and for the drawing of a figure from the life, and for the first prize (50*l.*) for a set of six drawings of a figure from the life. Mr. W. M. Loudan, who gained the second silver medal for the painting of a figure from the life, was congratulated by the President on his appearance later on to claim the second silver medal in sculpture for a model of a figure from the life—his success in this direction being a sign that the President's efforts to encourage young painters in the Academy to enlarge their culture by a study of plastic art are already bearing fruit. In the competition for a cartoon of a draped figure, the subject set was taken from the Odyssey, when Penelope, to put an end to the solicitations of her suitors, has proposed to marry the person who shall first bend the bow of Ulysses, and to the joyous hall returning,—

Bears in pensive state

The unbended bow, and arrows wing'd with fate.

The silver medal and prize (25*l.*) were awarded to Mr. Bernard Evans Ward, but an extra medal was given in this competition to Miss Margaret Dicksee, a sister of Mr. Frank Dicksee. The first Armitage prize (30*l.*) and bronze medal was awarded to Mr. Horace B. Fisher for a design in monochrome for a figure picture on a subject selected from that period of Jewish history when there was no king in Israel; when every man did that which was right in his own eyes, and the young men of the tribe of Benjamin seized for brides the daughters of Shiloh, who had come out to dance in the vineyards. Mr. Fisher also carried off the second prize (25*l.*) for his set of six drawings of a figure from the life. Miss Mary Drew gained the prize (40*l.*) for a design for lunette decoration—an allegorical illustration of *Music*. Mr. Henry Alfred Pegram was another double prizeman, and won the first prize (30*l.*) for a model group, *The Good Samaritan*, and the prize (10*l.*) for a model of a statue. Mr. R. T. Fallon was awarded the first prize (50*l.*) for a set of three models of a figure from the life in the competition to which the president alluded in his sympathetic remarks on the untimely death of Mr. Wade. The travelling studentship in England (60*l.*) was awarded to Mr. W. G. B. Lewis for a design for a public library

Mr. Norman Gething will read a paper entitled “Hearts in our Art” at the meeting of the Birmingham Architectural Association on Tuesday, the 19th inst.



## THE WORK OF THE KYRLE SOCIETY.\*

THE Kyrle Society, by adopting the name of the "Man of Ross," proposes, I fancy, to do its work in his spirit, and gild the ordinary work of assisting the poor by carrying down to them those cheering influences of natural and artistic beauty which do so much to change the habitation into the home. The London Society, in its published statement of what it proposes to do, thus describes its aims:—

I. To decorate by mural paintings, pictures, gift of flowers, and other means, workmen's clubs, schools, and mission-rooms used for social or religious gatherings, without distinction of creed.

II. To lay out as gardens any available strips of waste ground, and to encourage the cultivation of plants not only in windows, but also in areas and back yards.

III. and IV. To co-operate as far as possible with the National Health Society in securing open-air spaces in poor neighbourhoods, to be laid out as public gardens, and in getting rid of smoke.

The efforts of the committee are directed to preserving open spaces both in town and country. In London it assists in securing pleasure-grounds for the people by inducing the owners of squares to throw them open at certain times and under proper regulations, or in other cases by effecting the conversion of long disused churchyards into public gardens. In the country the committee endeavours to arouse public attention to the great importance of rural open spaces to all. It enlists the sympathy of landowners in the needs of the people, and encourages the dedication of private lands to public use. It also co-operates with the "Commons Preservation Society" in securing equitable arrangements in regard to common land.

For these purposes donations either of money, objects of art, cut flowers, plants, shrubs, and bulbs will be gladly received by the hon. secretary. It will, however, be evident that any personal help which can be given in the decoration of rooms, &c., distributing plants and flowers in poor districts, or singing in the voluntary choir, is most valuable, and the committee gladly welcome all who offer such aid.

The second half-yearly report for 1881 shows how these aims are carried out.

The decorative branch decorated the girls' school at St. Mary's, Battersea, at the request of Canon Erskine Clarke, the vicar, who furnished the necessary funds. One side of the room being occupied by a row of windows, the scheme of decoration was confined to the opposite wall. At a height of about 7 feet from the floor is a band, 2 feet 6 inches deep, of dark green canvas, on which are painted flowers illustrative of the four quarters of the world. Over the two principal doors are panels representing, respectively, girls coming to and going from school; while a third, leading to a classroom, shows the scholars at their work. These groups of figures are painted in dark red outline on a pale yellow ground.

The decorations intended for the typhoid fever wards of the London Fever Hospital were completed, and consist of twelve flower panels; and a screen, which forms a division between the two compartments of each ward, has been decorated with some tiles, the gift of a member of the society.

A group of five panels of zinc, painted pale blue, and on them in large letters the verses on the "City Sparrow" by Miss Williams, has been placed in position in the playground in Baker's Row, Whitechapel. Above, below, and flying in and out between the lines of the verses are introduced the sparrows, each panel representing them in different circumstances—on the house-top, among the summer boughs, or hunting in the snow for the winter dole of crumbs. This group of five panels is set in rough cast plaster, and is protected from the weather by an ornamental oak canopy. High brick walls enclose the ground on three of its sides, and it is with a view to lessen the unsightliness of the surroundings that this decoration has been placed there.

A decoration has been sent to the Princess Louise Home for Girls at Wanstead. It consists of a supermantel of panels in pale yellow, painted in black, and fitted with small shelves; these panels are painted with branches of honeysuckle and wild roses, a bird's nest poised on a branch, and summer flowers growing below as in a field; branches of wild roses with bees form an arch over the upper panel, and partly cover a lettered commemoration of a gift of 500*l.* to the institution. In the same room six figure panels, placed on the lavender-coloured walls, represent work and play. These figures, painted on a yellow ground, very prettily indicated "Knitting," "Hanging out Clothes," "Ironing," "Gathering Fruit," "Making a Pie," and "Skipping."

The room used for chapel and dining-hall in Bethnal Green Workhouse was decorated with banners of dark-red American cloth, on which were painted in oils appropriate texts and emblems. They were so arranged as to fill the spaces on three sides of the room, and on the fourth a text has been arranged to fit into the panels of the gallery which runs along that side.

The Society also gave a border of Walter Crane's pictures, mounted on red linen and varnished, to a room used for mothers'

\* From a paper by Professor Lindsay, read at a preliminary meeting in Glasgow.

meetings, at St. Leonard's, Shoreditch. A grant of pictures was given to a mission hall at Peckham, and a loan of pictures to the Home of the Marylebone Branch of the Society for Providing Trained Nurses for the Poor.

The musical branch of the Society gave five oratorio performances in churches and chapels in the poorer parts of London, besides ten miscellaneous concerts.

The open spaces and the smoke abatement branches are content to aid other public associations, such as the National Health Society; but the kind of work done may be inferred from the facts that the proprietors of two sets of gardens were induced to open their grounds to their poorer neighbours during certain fixed hours on the condition that a care-taker was appointed to see that no damage was done, and that the Society voted the sum of 25*l.* to pay for a caretaker for the Munster Square Gardens for one year. This London Society which does so much work grew out of small beginnings. About ten years ago a few old friends and pupils of Miss Octavia Hill, whose good deeds among the London poor are well known to every one, met and started it; and it has grown little by little until five years ago it took public shape at a public meeting, and now has three distinct branches, each with a committee and secretary of its own. The work is all done by volunteers. Volunteer artists do the decorations, and volunteer singers render the oratorios and give the concerts. The Society provides the materials for the decorations and pays for their mounting, but the designs—usually furnished by artists who approve of the work and are glad to give their aid—and they are executed by members of the association. The musical branch pays a teacher to train the choir and to lead at the concerts, and when an oratorio is given an organist is also paid.

In Nottingham the Kyrle Society has united with several other benevolent associations to form a guild or organisation of various kinds of work among the poor, but its objects and modes of carrying them out are the same as in the parent association in London. Last year it decorated the Children's Hospital with appropriate subjects, and it spends a large portion of its work in promoting by cottage flower shows the brightening of poor homes by such flowers as hyacinths, fuchsias, and geraniums.

The Birmingham Society has only been two years in existence, and has in the short time made great progress in that energetic town. It divides its works into three branches—decoration, music, and window-gardening. Its first annual report states that the special aim of the Society is to supplement the efforts of those who are striving in various ways to raise the people to a higher level, by increasing the stock of pure and innocent pleasure open to the hard-working poor, and thus leading them to seek and to find enjoyment in something higher than the gin-palace, and more refined than the music hall. The decorative section seeks to beautify the rooms used for social gatherings among the industrial classes and the poor, such as workmen's clubs and mission rooms, also hospital wards and corridors, work-houses, Board schools, and so on. It began with a large room, opened under the auspices of the Lady's Useful Work Association, and meant to be a place of recreation for the young women employed in the work-rooms of large drapery establishments during their few hours of leisure. The room was made more attractive and homelike, the walls were brightened with pictures, and the shelves with ornaments. A few pictures were presented to be hung in the outer hall of the Homœopathic Hospital, where the patients wait until their turn comes to see the doctors in residence. The governor of the workhouse asked the Society to decorate the sick children's wards, and the poor little creatures have now something bright to look at. The schoolrooms of the Lawrence Street Mission, dingy and dull beyond description, were hung with large painted panels, water-colour drawings, and photographs, which the Society has been assured are a source of great delight to the very poor people who frequent the rooms. The musical section gave concerts to the convalescent patients and nurses at the General Hospital, to the very poor people in the neighbourhood of the Lawrence Street Mission, and to the bedridden folk in the workhouse. Perhaps the most interesting part of the work of the Birmingham Society was done in the window-gardening section. The report says that it was touching to see from what distances poor people came in pouring rain from the lowest parts of Birmingham to get a few plants wherewith to brighten their dingy homes; and all this has been done by a society which numbers 150 members, mostly subscribing only 2*s.* 6*d.* The Mayor of Birmingham, Mr. Richard Chamberlain, brother of the President of the Board of Trade, is president, and has doubtless infused some of his own energy into the Society there.

Mr. James Hey Davies, of the Manchester Academy of Fine Arts, has been commissioned by the Manchester Art Museum Committee to produce the first of a series of studies in trees. The studies are intended for exhibition, with a view of representing the beauties of every class of tree life, supplemented with a drawing underneath each finished painting, showing the details of the tree represented. Mr. Davies's first example will be a study of the ash in winter.



## NOTES AND COMMENTS.

THE exhibition of models for the equestrian statue of ETIENNE MARCEL, to be erected at the Hôtel de Ville, is now open at the City of Paris Pavilion, in the Champs-Élysées. Seventy-five sculptors have competed, and the jury will give their verdict next week, at the same time as in the competition for the execution of LEDRU-ROLLIN'S statue, designs for which are also on show in the Pavilion.

THE plans sent in for the rebuilding and extension of the Sorbonne have been displayed at the same place during the past week. The competitors, who number twenty-seven in all, are all of French nationality, foreign artists having been excluded: the list includes the well-known names of BALLU, E. DE PERTHES, NEVOT, DEFRASSE, FORMIGÉ, MENJOY DE DAMMARTIN, &c.

It has been often suggested that if iron columns and box girders could be filled with water and kept cool during a fire, they would cease to be the most dangerous parts of a structure. But so many objections have been derived from the failure of experiments that this mode of protection has been latterly disregarded. Mr. J. M. HOOKER, architect, of Sevenoaks, has obtained provisional protection for an invention which he claims to be free from the defects of other arrangements for introducing water. Near the upper edge of each girder it is proposed to form rows of holes or slits in the web. The girders being in connection with the main, the water is turned on when a fire occurs, and fills the interior of the girder, overflowing through the slits on the burning material beneath. Where the girders exist already it is proposed to fix perforated pipes alongside of them. The columns can also be utilised as conduits. Among the advantages claimed for this system is that it is available for lintels over iron doors. One of the dangers attending the use of iron arises from its expansion when heated. It would be obviated by Mr. HOOPER'S plan, which is at least deserving of a trial.

MR. BERNARD SMITH is about to publish a volume of sketches in Spain which will form a companion to the "Continental Sketches," which have been received with favour by the public. From an examination of the proofs we are enabled to say that the thirty plates in the volume are admirably drawn, and that the subjects are always interesting. Spain is less known than it deserves to be, and the beauty of many of the buildings shown in the volume will be a surprise to those who have been called "stay-at-home travellers."

THE members of the Metropolitan Board have been horrified at the vandalism of the District Railway Company in breaking holes in the Embankment roadway for the purposes of ventilation. But what is proposed has been authorised by Parliament. Railway companies have been for many years allowed to treat buildings—old and new—as if they were heaps of earth, and objections have been set aside because they were supposed to be "sentimental." The pet piece of construction belonging to the Board is about to take its turn of injury, and the members are zealous in its defence. But if they had displayed any interest in the amenity of London before now, there need be little fear of the Embankment. If Ludgate Hill—one of the most picturesque roadways in the metropolis—could be destroyed by a hideous piece of ironwork, if monstrous stations are allowed to be erected on the finest sites, how can railway directors be expected to reverence the Embankment and to exempt it from their operations? BRINDLEY maintained that Nature made rivers in order to feed his canals; and it is, we suppose, the belief of engineers that all things must be utilised for their advantage. The directors and engineers are but carrying out the provisions of their Act, and if the Embankment is to be saved, a concession or a subsidy will be expected by the company.

UNDER the management of M. HENRY BOUTET, the aquafortist, for the art portion, and of M. HENRI SECOND for the letterpress, a new high-class monthly review is about to appear in Paris under the title of *L'Art Moderne*. Each number of the publication is to contain several original sketches by well-known artists, and a full page *eau-forte* engraving not previously published.

A SCHOOL of theoretical and practical teaching is about to be opened at the Louvre in the former apartments, off the Cour Lefuel, of the Governor of Paris. M. BERTRAND, member of the Institute, will deliver the lectures on the national antiquities; M. PIERRET, those on the historical monuments existing from the reign of CHARLEMAGNE. M. REVILLOUT will deal with the explanation of demotic papyri; M. LEDRAIN will lecture on Phœnician epigraphy; and M. FÉLIX RAVAISSON takes the department of the history of ancient art.

THE South Kensington authorities have generally tried to secure some attractive novelty for holiday times. This season they have been most fortunate. Mr. JONES'S bequest by itself should be sufficient to bring crowds from all parts of London. It supplies, too, a need of the Museum, which has not been rich in examples of various periods of French art. Many of the greatest artists of France are represented in the collection. The value of the objects is probably half a million. It is known that to one dealer in London Mr. JONES paid 190,000*l.* from time to time, and there were others who were able to obtain patronage that was almost as munificent. It is a fortunate circumstance that the nation has secured so important a bequest, and it is to be hoped that the returns of the visitors to the Museum will equal those which represented the visits of the public at times when objects were shown which could not be said to possess artistic interest.

A PARIS paper announces that Prince FILANGIERI, the well-known writer and *savant* of Naples, has just offered to the Louvre Museum a collection of works of art valued at upwards of 2,000,000 fr. The circumstances that have led to this magnificent gift are rather amusing. The prince some time ago offered the collection to the City of Naples, his native place. Shortly afterwards he received a demand from the District Superintendent of Taxes for 300,000 fr. (12,000*l.*) as donation tax under the existing law. At sight of this singular letter he hurried to Rome, and laid the matter before M. MAGLIANI, the Finance Minister, who was obliged to inform him that he had no power to release him from the strange debt incurred by his generosity. In face of this declaration, the prince decided to withdraw his offer, which had not yet been officially accepted by the authorities of Naples, and closed with that of the French Minister of Fine Arts, who previously had placed at his disposal three rooms in the Louvre for the reception and exhibition of the collection. Matters thus stand for the present. It is said that the Italian Ministry has introduced a measure into Parliament to exempt donations of this sort from payment of the tax. It is probable, however, that the law will be too late to answer its immediate purpose, for Prince FILANGIERI can scarcely be expected to change his plans a second time. In the meantime, the Paris press is naturally elated at the result of the present extraordinary state of the Italian law.

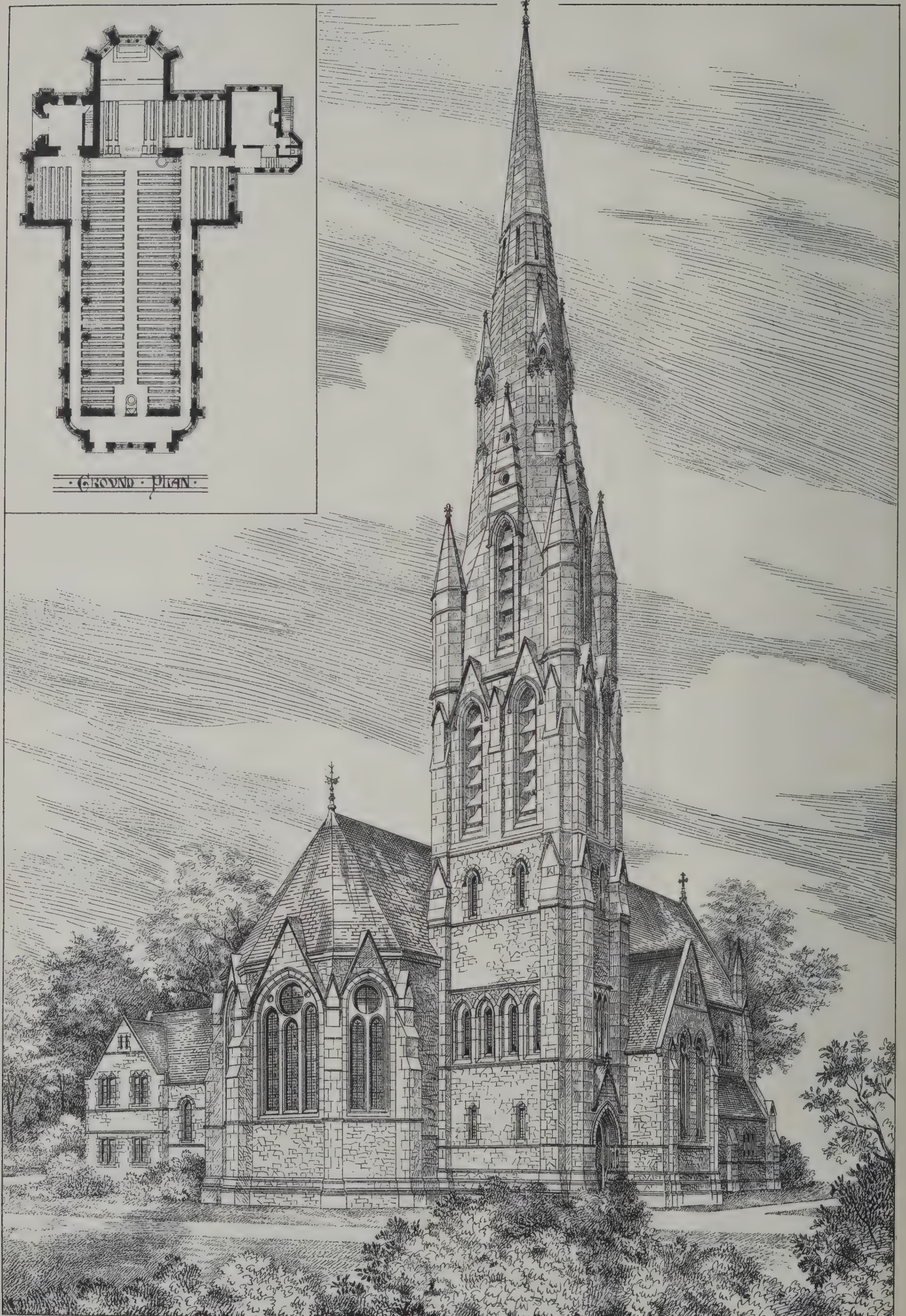
MR. ALFRED CROSS, of the firm of CROSS & WELLS, was buried at Hastings on Saturday last. Mr. CROSS, who was born in 1830, commenced the practice of architecture at an early age, and he built the Ship Hotel in Greenwich when he was only twenty-two. Afterwards he left London for Hastings, where he resided until his death. Mr. CROSS was associated with several of the public buildings in the town besides a great number of houses and shops, and was for a time connected with the Duke of BEDFORD'S estate in London. Most of the local architects attended the funeral.

ALTHOUGH the system of a progressive income-tax has never hitherto found favour in the eyes of the French people, the Municipal Council of Paris has adopted the principle in its assessment of house property and levying of direct taxes. Thus in the city budget for 1883 we find the following rates adopted for the *contribution mobilière*:—For tenancies assessed at from 400 fr. to 599 fr. the occupant will have to pay 6½ per cent. on the assessed value; from 600 fr. to 699 fr., 7½ per cent.; from 700 fr. to 799 fr., 8½ per cent.; from 800 fr. to 899 fr., 9½ per cent.; and from 900 fr. and upwards, 10½ per cent. Tenants paying less than 400 fr. per annum, or assessed under 400 fr., will be entirely exempt. Such are the rates adopted by the Council, but it must be said that they have not yet been sanctioned by the Minister of Finance, whose approval is necessary before they can be enforced.









Sprague & Co. 22, Martins Lane, Cannon St. E.C.

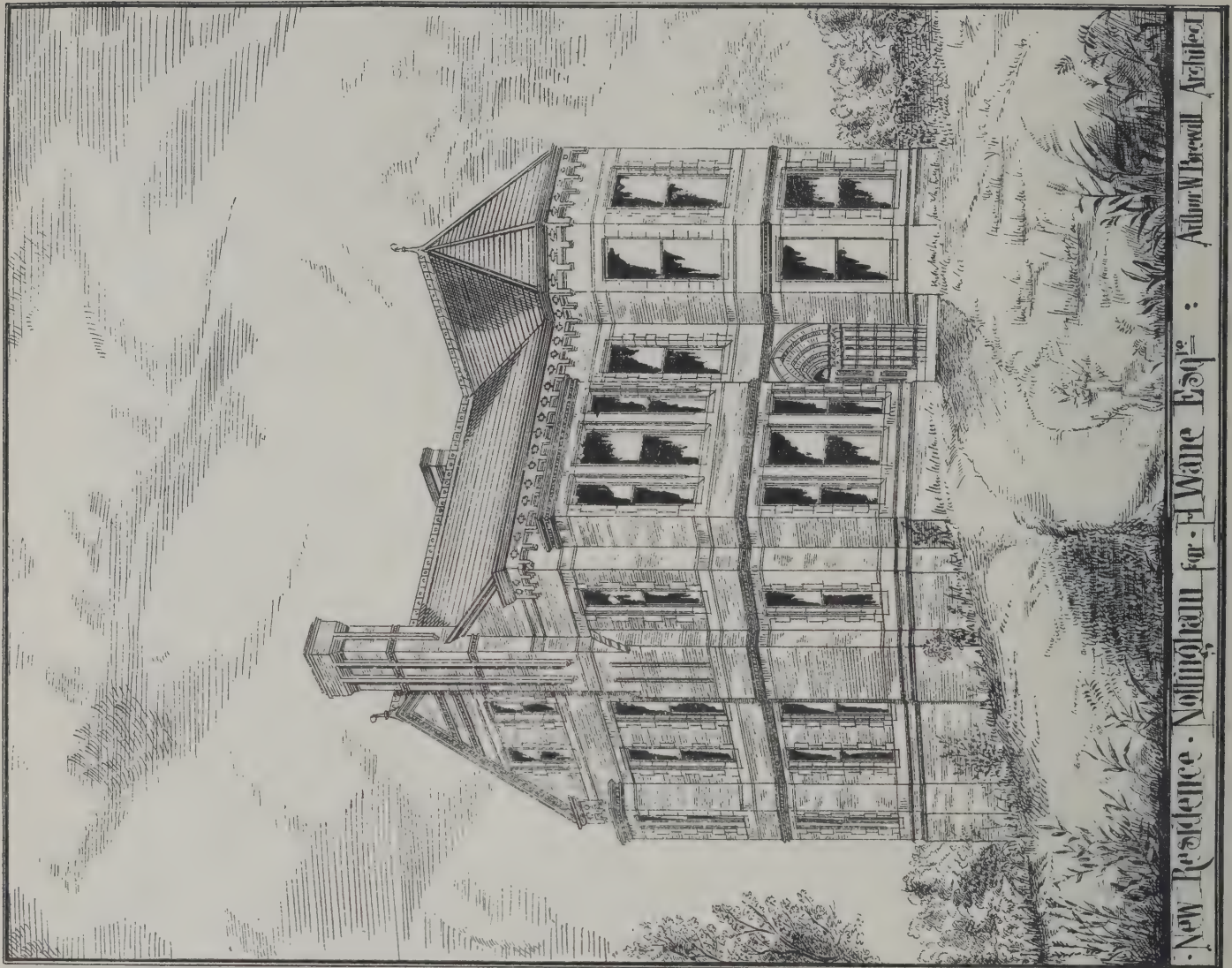
DESIGN FOR A SUBURBAN CHURCH.

BY P. AULD, ARCHITECT.

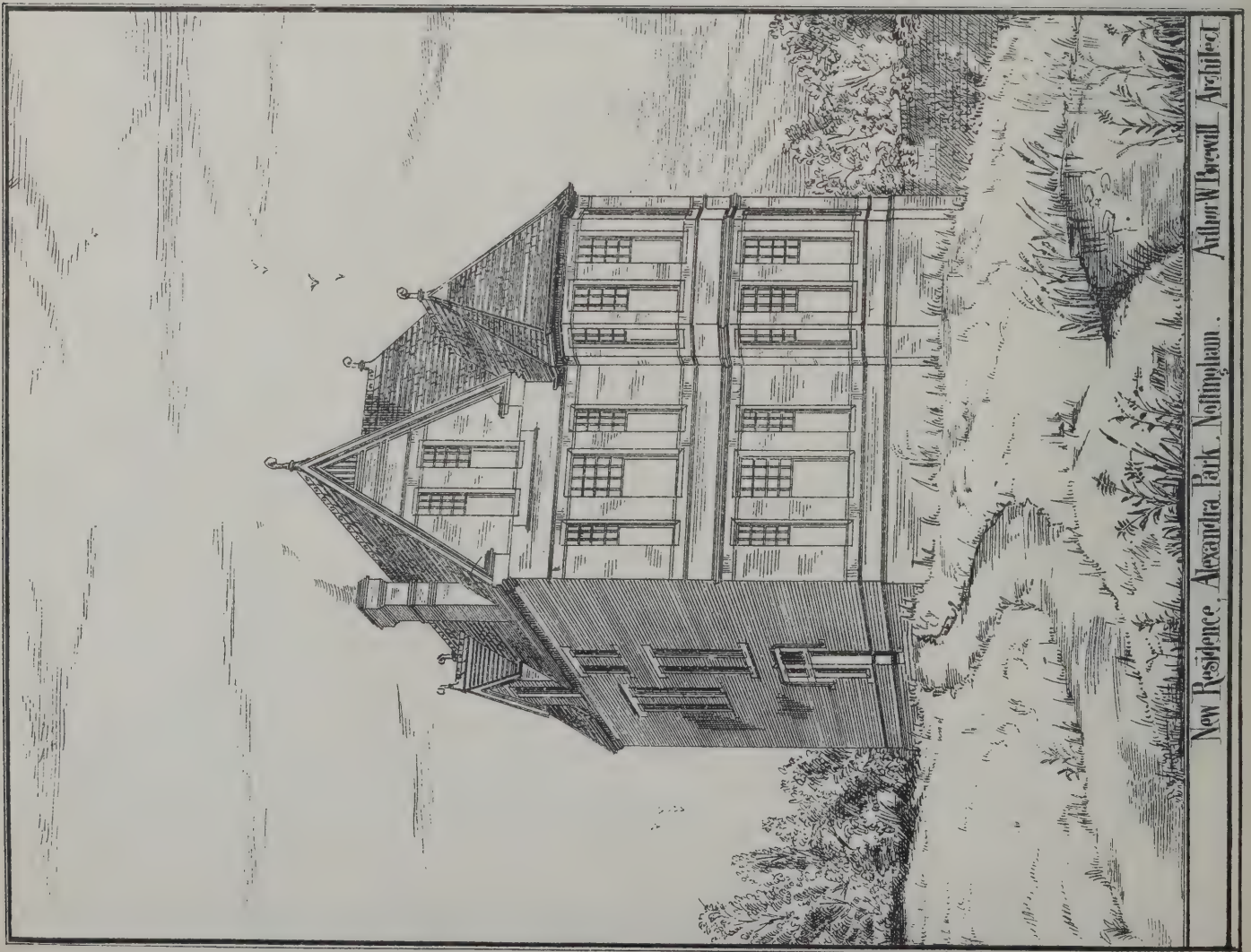








New Residence - Nottingham - for - F. Wane Esq<sup>r</sup> - Arthur W. Bewell - Architect



New Residence, Alexandra Park, Nottingham. Arthur W. Bewell - Architect









HOLLOWAY COLLEGE, EGHAM.

EAST GATEWAY.

W.H. CROSSLAND, ARCHT.





Sprague & Co. 22, Mortimer Lane, Cannon St. E.C.

## HOLLOWAY COLLEGE, EGHAM.

WEST GATEWAY.

W.H. CROSSLAND, ARCHT.







The Architect. Dec<sup>r</sup> 16<sup>th</sup> 1882.



*Sprague & Co. 22, Martin Lane, Cannon St. E.C.*

DRINKING FOUNTAIN at LYTHAM, erected by LADY E. CECILY CLIFTON  


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R. Knill Freeman, f.r.s.b. Architect

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Sprague & Co. 22, Mark Lane. Cannon St. EC.

**CHURCH OF S<sup>T</sup> ANDREW, REDRUTH, CORNWALL.**

JOHN P. SEDDON & JAMES HICKS.

JOINT ARCHITECTS.







## ILLUSTRATIONS.

EAST AND WEST GATEWAYS, HOLLOWAY COLLEGE.

A VIEW of the tower of the Holloway College was lately published in *The Architect*, and we now give views of the large gateways, which have also been reproduced by the ink-photo process from drawings by the architect, Mr. W. H. CROSSLAND, and exhibited this year at the Royal Academy. The gateways are in direct communication with the principal parts, among others the picture gallery, for which Mr. HOLLOWAY has already purchased paintings to the amount of 60,000*l.*, and he generously proposes to expend a further sum of 40,000*l.* on the gallery.

It may be stated here the bricks which were used in the erection of the college have been supplied by Mr. T. LAWRENCE, of Bracknell. Nearly eighteen millions of his well-known bricks were used.

DRINKING FOUNTAIN, LYTHAM.

THIS drinking fountain is being erected by Lady ELEANOR CICELY CLIFTON on an open space in front of the market-house at Lytham, and the design has been prepared with a view to harmonising with the surroundings.

The outer part has the base of Yorkshire stone moulded and well elevated on a circular platform of three steps. The upper part is formed with clustered pilasters of English oak with carved panels and capitals, the superstructure also being of English oak covered with red tiles.

Round the frieze is placed the following inscription:—"Eleanor Cicely Clifton erected this fountain in memory of her husband, John Talbot Clifton, who died at Hamman Rhea, Algiers, April 16, 1882."

The inner pedestal and basins are of Yorkshire stone surmounted by the Clifton arms, and having the niches and drinking jets encircled with dolphins and other appropriate ornament in bronze. The carving throughout has been specially designed to suit a seaside locality, seaweeds, fishes, and shells being introduced in the panels and other parts.

In addition to the four drinking basins a trough for horses and dogs is provided on one side.

Mr. JOHN ROBERTS, of Bolton, is the contractor, and Mr. R. KNILL FREEMAN, F.R.I.B.A., of Bolton, the architect.

ST. ANDREW'S CHURCH, REDRUTH.

THIS church was referred to in the paper which was read lately by Mr. SEDDON, at the Architectural Association. Geometrical drawings of the buildings were published last week in *The Architect*.

VILLAS AT NOTTINGHAM.

DESIGN FOR A SUBURBAN CHURCH.

## THE SOCIETY OF ENGINEERS.

THE twenty-eighth annual general meeting of the members of the Society of Engineers was held on Monday evening last, the 11th inst., in the Society's hall, Victoria Street, Westminster. The chair was occupied by Mr. Jabez Church, President. The following gentlemen were balloted for and duly elected as the Council and officers for the ensuing year:—As President, Mr. Jabez Church; as Vice-Presidents—Mr. F. E. Duckham, Mr. Arthur Rigg, and Mr. C. Gandon; as ordinary members of Council—Mr. R. Berridge, Mr. Perry F. Nursey, Mr. A. F. Phillips, Mr. W. Schoneyder, Mr. Arthur T. Walmisley, Mr. T. H. Hovenden, Mr. Henry Robinson, and Mr. John Waddington; the three last-named gentlemen being new members of Council; as Honorary Secretary and Treasurer—Mr. Alfred Williams; and as Auditor—Mr. Alfred Lass. The proceedings terminated by a general vote of thanks to the Council and officers for 1882, which was duly acknowledged by the Chairman.

**Berne Cathedral.**—Canon Dr. Bock, the well-known antiquary, who has been making an examination of the relics belonging to the cathedral of Berne, declares it to be richer in archaeological treasures than almost any other Protestant church in Christendom, Canterbury Cathedral included. The money worth of the treasures he estimates at upwards of 4,000,000 francs. He has found many interesting objects, hidden away in cases which had not been opened since the Reformation. A supposed carpet, part of the spoil of the battle of Morat, described as Charles the Bold's horsecloth, proves to be the mantle of that prince, as Grand Master of the Order of the Golden Fleece; and possesses an intrinsic value, apart from its associations, of 50,000 francs.

## THE ARCHITECTURAL ASSOCIATION.

THE third ordinary meeting of the Association was held on Friday evening, the 8th inst., Mr. E. G. Hayes, President, in the chair.

The PRESIDENT called attention to the proposed exhibition of architectural drawings to be held in Edinburgh, circulars of which were distributed among the members. Votes of thanks were awarded for donations to the library by the Council of the Sanitary Institute, and Mr. J. A. Gotch.

The Hon. Librarian, Mr. H. W. PRATT, stated that the new catalogue of works in the Association Library was now on sale, and that it was well worth being purchased by every member, as the cost was merely nominal.

Mr. COLE ADAMS, as Secretary of the Association Travelling Studentship, said that no notice had appeared in the Brown Book of the munificent gift of 100*l.* received from the Sketch-Book Committee in aid of the studentship fund; neither was there any mention of the fund. As secretary he was engaged in getting in the subscriptions, and the committee would be in a position to publish a balance-sheet in the next year's issue, when the opportunity would be taken advantage of to record their appreciation of the generous donation of the Sketch-Book Committee.

Mr. WOOD urged that more support should be given to the Advanced Class of Construction in the way of attendance. He considered that as their senior members were willing to sacrifice valuable time to give them the advantage of their experience, the least they could do was to show their appreciation of it.

The PRESIDENT said that, in consequence of the honour done by the Association in electing him to the presidential chair, he had had the privilege of attending the interesting ceremony at the New Law Courts on the 4th inst.

Mr. F. A. FAWKES, Fellow of the Horticultural Society, then read a paper on

## Horticultural Buildings.

Mr. FAWKES began by saying his object in preparing his paper had been to embody such information and points relating to the construction of horticultural buildings as were outside the province of the gardener, and which did not usually come within the knowledge of architects; and this without discussing questions of architectural design or constructional detail that architects were probably better informed on than he was. The words, hot-house, greenhouse, glasshouse, so frequently used indiscriminately, divided themselves into two classes—growing-houses and showing-houses. Growing-houses, again, divided themselves into three sections—those in which plants were grown in pots on stages, or at a certain distance from the glass, comprising simple greenhouses, planthouses, houses for bringing on bedding stuff, some descriptions of orchard-houses, and plant-stoves without bottom heat; secondly, houses in which foliage was trained along the roof, such as vineries; and thirdly, houses in which root action was to be stimulated, such as cucumber and melon houses, pine succession and fruiting houses, pits with forcing and propagating beds, plant-stoves containing heated beds, &c. After observing that he would confine his attention to growing-houses, Mr. Fawkes said that the peculiarly trying conditions under which horticultural buildings existed, such as the varying temperatures of the inside and outside, the moisture-laden air of the former, the exposed character of the structures, the uncertainty of our climate, the necessity for durability, solidity, and yet the minimum of obstruction to light, warranted every precaution being taken that the materials used should be thoroughly sound, the construction such that there should be no crevices for the retention of moisture or harbouring of insects, and that the buildings, by subsequent periodical painting and repair, should be kept in a good state of preservation.

The first main point in connection with a growing-house was to determine the pitch of roof most advantageous for various purposes. When the sun's rays struck a sheet of glass, some of those rays could not pass through; the more nearly sunlight struck a roof of glass at right angles, or within 30° of a right angle, the less obstruction to the rays of light did the glass afford. The next point was how to obtain the maximum impingement of the sun's rays at, or as near as possible to, a right angle, for the position of the sun relatively to the earth was always varying. On the shortest day with us in London the sun rose about 50° east of south, attained an altitude at twelve o'clock of about 15° above the horizon, and set about 50° west of south. On the longest day the sun rose about 50° east of north, attained an altitude of about 62° at twelve o'clock, and set about 50° west of north. If we wished to build in the latitude of London a greenhouse of which the roof should receive the sun's rays at right angles on December 21, the roof must be built at an angle of 75° with the horizon; whereas on June 21 the angle would only have to be 28°. For ripening purposes, to ensure accuracy of the highest degree on any particular day and place, it would be necessary to take the latitude of the place, and from it subtract the sun's declination between the vernal and autumnal equinoxes; or to it add the sun's declination between the autumnal and vernal equinoxes, and the required inclination of roof would be obtained. In the *Nautical Almanack* the sun's declination for every day in the year would be found. Exactly at the equinoxes, when the planes of the equator and ecliptic coincided



the latitude of the place equalled the angle which the roof must make with the plane of the horizon. These principles were only necessary where heat and light was required under the most advantageous circumstances, as for ripening fruit trained along the roof at a certain date. In most cases, for plant and flower growing, and where pot plants required to be near the glass, a low pitch economised space and artificial heat, and was better than a higher pitch. He recommended an angle of from  $26^{\circ}$  to  $30^{\circ}$  lower than which rain was apt to drift in under the laps. For fruit growing along the rafters, where the maximum sun influence was required for ripening, from  $36^{\circ}$  to  $44^{\circ}$ , or a mean of  $40^{\circ}$ ; for wall fruit, where the glass must be as near the wall as possible,  $60^{\circ}$  to  $70^{\circ}$ , and a specially narrow house was advisable.

The most natural form was the *lean-to*, and the best aspect would be facing the south. Mr. Fawkes explained that as in a part of the year the sun rose and set so far north the early morning and late evening sunlight would be lost, and according as the aspect deviated from due south aspect, the sun would strike earlier or later. Having brick protection from the north, and glasswork facing south, other things being equal, a lean-to was easier to heat than a house in which the glasswork was exposed in every direction. The span, the next form of house, was used where no high wall existed or was required; for building at right angles to, and in combination with, a range of lean-to houses against a south wall; where minimum height was required, so as to cause as little obstruction as possible; when comparatively small plants required to be easily accessible, and yet near the glass, and when from local circumstances this was not so easily effected in a lean-to; when the sun's rays were required to reach all parts of a plant; when great length of rafter was unnecessary, and when the length of a house was to be north and south, and each side required an equal amount of solar rays. This direction gave the best aspect for a span house. A sort of compromise between the lean-to and the span was the three-quarter span. This was useful when the back wall of an otherwise lean-to required to be as low as possible, that the wall might form the minimum obstruction; also to let light in at the back, or for utilising early or late sunlight, which would otherwise be lost; and when maximum length of rafter was not a *sine qua non*. It was impossible, however, to give a *résumé* of all the combinations which could be constructed.

When a number of houses were required they should be planned compactly without straggling; buildings for consecutive operations should be in consecutive order, so that the boilers should be in a convenient position for their work, and that each building might suffer nothing from combination with the others. Site and levels were important considerations in the planning. The site being frequently a matter of choice, there should be no trees or other objects to obstruct the sun's rays, and the site should be that which would best suit the conditions of aspect, drainage, stokehole, furnace, chimney, potting-shed, fuel-shed, and other buildings, retaining a particular view, &c. If the ground were not level, the exact nature of the inequality should be ascertained; if fairly level in the direction of the length of the buildings, well and good. If the ground fell in that direction, various courses were open for adoption. In any case it was advantageous for the boiler to be at the lowest end, when in many cases excavations for a stokehole might be avoided. Where the ground was perfectly horizontal, the question of floor levels must be considered. He had generally made the floor levels (diagrams referred to) correspond with the ground levels. If there were a difficulty of drainage, or the boiler could not be sunk as low as necessary, it was often advisable to raise the floor level. On the other hand, it might be necessary to sink the floor line below the ground line, that the houses might form the minimum obstruction, in which case great care must be exercised in the drainage, or the houses would be perpetually flooded. Houses used to be sunk to retain the heat, but with existing facilities for heating it was now unnecessary. Houses comprising one range should have their floors on the same level; steps from one house to an adjoining one should be avoided, but, if necessary, parallel disconnected lines of houses might occupy different levels without inconvenience. There should in all cases be easy means of intercommunication between all houses for a wheelbarrow.

In constructing the roof of a glasshouse, obstruction to the sun's rays must be avoided, yet the structure must be durable and substantial, and lateral thrust must be avoided. The rafters should be sufficiently deep for the purpose, but not so deep as materially to arrest the oblique rays of the sun. A roof well tied with light iron tie-rods would enable the rafters to be shallower. As to whether the roof should be of framed lights or not, from his own experience he would say a sash-bar roof with T-iron purlins between the rafters was lighter, had less material, was not so liable to get out of repair by rotting, and would, in fact, answer every purpose better than the heavier and more substantial sash roof. The advantages of a sash over a sash-bar construction were that the roof could be practically stripped, if for cultivating purposes the maximum amount of air were required at any season, and the house could be taken down without the necessity of taking out the glass. For clear glazing, 21 oz. English sheet was generally used. Thinner than this was not advisable, nor was Belgian glass so desirable as English. For fixing the glass he had come to the conclusion that for purely growing horticultural houses no system

was more advantageous than putty-glazing, and it was far from perfect, for putty was apt to peel off, crack, and form crevices for the retention of moisture and insects, and cause the woodwork to rot. Then it was troublesome to renew putty-glazed glass, as well as put it on in the trouble instance.

In some systems of mechanical glazing the glass was held in place by metallic clips, in others by compressible metallic bars, in others between strips of vulcanite or other elastic material, the glass and elastic being held in position by wood or metallic capping and screws. In other systems the glass was dropped into grooves. In all these systems the glass came in contact with a metallic or an elastic substance. In the former case there must be a sufficient amount of "play," or the glass would break. In the latter case the elastic substance gave far more trouble to gardeners than putty properly made and applied, chiefly on account of internal moisture, excessive variations of temperature, and atmospheric influences. If, on the other hand, the glass had any "play" hot air escaped; the house could not be properly fumigated; crevices for retention of water by capillary attraction abounded; subsequent freezing of the water and breaking of the glass were liable, and the crevices which held the water would harbour insects. For other than growing houses mechanical glazing might frequently be employed with advantage.

The most usual form of ventilator was a framed light, hinged at the top and opening from the bottom outwards. Sliding sashes for roof ventilation were almost out of fashion except for simple frames, low pits, and houses in which the roof required to be practically stripped at certain times. Sliding lights were cumbersome and unmechanical, the roof had to be abnormally heavy, and obstructed greatly the solar rays. Both top and bottom ventilators should extend along the whole length of a house, except perhaps in the case of the top ventilators of a span, or three-quarter span, which might often be arranged alternately on each side of the ridge. Continuous ventilators being necessary, consecutive lights might be made to open simultaneously, or each arranged to open separately. Unless, however, there were a great number of lights to manipulate, or unless they were not easily accessible, it was generally advisable to adopt the latter course, for it might not do to have exactly the same area of ventilation along the whole length of a house; at one part there might be plants which required a more constant and copious renewal of air than at another part. If lower vertical lights or ventilators were opened separately, then the ordinary notched hand "set-opens" might be used. If top roof-lights were opened separately, then a quadrant bar, terminating in an eye, might be fixed to each light, and actuated by a cord held by a counterbalance weight or a hook in an adjoining wall or mullion. When, however, to save time, from the large number of ventilators to open, or from inaccessibility—as, for instance, when a vine border or a great width of staging in front of ventilators necessitated their being opened simultaneously—the best gear consisted of a pair of double-jointed arms attached to each light, and keyed to a bar held in blocks fixed to the mullions, the partial rotation of the bar and opening of the lights might be effected by a handle keyed on to the bar at any part, moving in and pinned to a quadrant or half-circle; or the motion could be conveyed by a connecting-rod to some distance. Similar apparatus might be used to actuate top-lights. Double-jointed arms were better than other forms, for they offered no obstruction to pots, plants, foliage, &c.

Roofs had occasionally to be wired to support foliage trained near them. In a lean-to you should take two flat bars turned edgewise and suspend them at back and front by holdfasts, bolted at back through the wall and at front into the mullions. Then at the necessary intervals wires should be stretched by means of raidisseurs to these two bars. Intermediate parallel bars, dependent upon the length of rafter, might serve to support these wires. The wires could thus be at short, long, or irregular intervals; or at any time and as often as required the distance apart of the wires might be altered. In this way they helped to tie on the roof, enabled painting and repairs to be more easily effected, and were more easily adapted to the wants of the gardener than fixing wires permanently and separately at right angles to rafters. He generally employed galvanised iron wire about No. 12 B. W. G., each spaced some 10 inches from the glass. With regard to the interior arrangement of the three classes of growing houses, to speak of the first, the points to be observed in planning the staging were: facility of drainage from pots; economy of space; accessibility; proper distance from glass—depending on height of plants to be grown. For ordinary plant growing the usual lattice-wood stage composed of 3 inch by 1 inch laths, with three-quarter spaces between them, was suitable. When, however, pots or plants required to be plunged in damp moss, sand, shingle, &c., then carefully drained concrete, slate, or zinc-lined wood stages might be necessary. The chief characteristics of a vinery, which belonged to the second class of growing-houses, were: training-wires along the roof; a prepared border, about 3 feet deep; provision for thoroughly draining this border, and for preventing roots of vines planted in it from penetrating to the subsoil. If the subsoil were of a retentive nature, then there must be concrete or other impervious base; on this rubble; then turf, grass downwards; then the compost forming the border proper. If the sub-



soil were of a porous nature, the concrete base might be omitted. It was generally considered best for the border to run outside as well as inside, therefore the front wall should be built on arches, or composed of iron uprights filled in above ground line by slabs of slate. The total width of a border should equal the width of the house. The chief characteristic of the third class—forcing-pits, &c.—was an arrangement of hot-water pipes to heat the soil of which the bed was composed, supplementary and independent of the pipes for atmospheric heat. The pipes might be carried through the bed itself; or, better, they might be carried through an air-chamber under the bed. In this position the vapour-troughs with which they might be fitted were more accessible, and was a better arrangement than that which necessitated water passing through the bed before it could be vaporised by the pipes.

In the treatment of conservatories or showing-houses several points were to be kept in view. A conservatory must be treated as one of the reception-rooms of the dwelling-house, and without departing from its strictly horticultural character, there should be an endeavour to make it approximate architecturally both inside and out to the rest of the dwelling-house. The functions of growing and showing must be regarded as separate, or in case of necessity a compromise must be effected or the conditions of the one would succeed to the detriment of the other. In a conservatory the eaves had frequently to be from 9 to 12 feet high and interior staging dispensed with; the site was generally dependent on proximity to a drawing-room or hall, where frequently the sun did not reach it. A conservatory required heavier scantling than a growing-house, and to a certain extent obstructive ornamentation. He would say they should, in designing a conservatory, construct it in harmony with the adjoining or surrounding architecture; give as much light as possible; ornament the construction. In the interior, he would say: throw away stages, hide the pots, and show natural beds and banks of foliage and flowers massed with artistic irregularity. There should be an ample paved space—not a mere path, but a space that a table and a chair or two might be placed in, and the conservatory should be regarded rather as a lounge than as a place to walk round in single file. If the size and nature of the conservatory permitted, rockwork, a fountain, or sculpture, might find a place in it. Baskets of hanging foliage looked well. Bare walls as well as other parts might have creepers on them. A grass mat or two might be thrown down here and there, and a parrot advantageously introduced. Sometimes an awkward space in the brickwork might easily be turned into an aviary. In fact, without sacrificing the strictly horticultural *raison d'être* of the structure, a judicious combination of art with nature would intensify the enjoyment derived from a conservatory, and the beauties of plants and flowers might be absolutely enhanced by the introduction of such artistic accessories as he had mentioned.

A vote of thanks was proposed to Mr. Fawkes for his paper by Mr. Cole Adams, and seconded by Mr. P'Anson, and supported by Mr. H. W. Pratt. These gentlemen in their remarks commented on the excellent series of drawings by Mr. Fawkes, which were hung around the room, who had admirably suited them for the purposes of the lecture.

Mr. FAWKES then replied, and the meeting adjourned.

### FIRES IN THEATRES.

MR. DION BOUCICAULT in a letter to the daily papers writes:—

The materials employed in building and furnishing theatres, both before and behind the curtain, may readily be rendered fire-proof if architects, builders, and managers would take the trouble and precaution so to provide. The process by which wood and textile fabrics can be made incombustible is not new, nor tedious, nor expensive, nor protected by patent. The entire of a theatre and its contents, including wardrobe, might be so treated at an outlay of less than 500*l*.

After the occurrence of the Brooklyn fire an exhibition was held at Wallack's Theatre, New York, in the presence of the heads of the fire department of that city. An ordinary scene was set on the stage; a large heap of wooden chips and billets several feet in height was placed in the midst. These materials had previously been treated by a simple process, which, it should be stated, does not apparently alter any textile fabric, even the most delicate muslin, in appearance, or in any sensible manner. A flexible hose one inch in diameter was fixed to the gas-main, and a flame was caused to issue from the nozzle about 6 feet in length, spreading to 2 feet in diameter. This torrent of fire was applied to the scenery and the heap of chips without affecting them in the slightest degree. The flame, rather alarming in dimensions and intensity, was held there until the officers of the fire department declared they were satisfied that the materials were incombustible.

A building constructed of such materials should be inspected and tested by qualified, skilled authorities, who, after being satisfied of its condition, might give a certificate to that effect. A copy of the paper should hang in every entrance, and be printed as a

standing part of every playbill. This precaution should serve to allay apprehension among the spectators, and greatly lessen the chance of panic.

Some years ago I ventured to suggest that theatres and all places of public amusement should form a mutual insurance company, with special rules and regulations, and with an experienced staff of officers to travel round inspecting theatres to ascertain and certify the rules and regulations were adhered to. Such supervision and care it would be the interest of the theatres to exercise over each other. The exorbitant premiums now paid to insurance offices would be reduced, and the marketable value of theatrical property be measurably enhanced. Any theatre reported careless and unsafe would not only forfeit its insurance and be struck off the books of the company, but no other prudent office would accept a risk on it; and thereby its marketable value would be deteriorated. The Lord Chamberlain might insist that the muslin skirts worn by the ballet should be fireproof. I know by experience the risk incurred when the stage, during a pantomime, is laid down with ground rows of gas over which these skirts float. Clara Webster was burnt alive in sight of the audience from an accidental touch of her ballet skirt to a gas-burner. If this poor child had rushed among the corps de ballet, it may be left to the imagination what a horrible scene would have ensued. Yet no adequate precaution has been taken to provide against the recurrence of such a catastrophe.

### FIRES AT COUNTRY MANSIONS.\*

THE announcement that a country mansion has been totally or partially destroyed by fire has come to be recognised as one of those inevitable contingencies that are bound to occur at intervals comparatively of short duration. A fire, no matter where, is a disastrous occurrence at any time, although there may be occasionally some consolation in the fact that it paves the way for much needed improvements. The great fire of London was considered at the period of its occurrence an almost unparalleled calamity, but we have no doubt now that it was, on sanitary grounds alone, productive of the greatest possible good. But the destruction of some rare specimen of ancient domestic architecture, containing perhaps an invaluable collection of art treasures, and itself rich in historical associations, has no redeeming feature; and when such a calamity occurs on a large scale, we cannot but feel that a national loss has been sustained.

Although there is no doubt that the destruction of many old country mansions is the result of carelessness, or at any rate might have been avoided with the exercise of some care and forethought, yet the greater portion have, I think, come to an untimely end from causes which it was very difficult practically to provide against.

I am led up to this remark by a paragraph in *Baily's Magazine* for November anent the loss by fire of Everleigh House in Wiltshire, in which, with the best of intentions, it is suggested, with the view of preventing conflagrations, to have every fireplace, flue, and hearth examined and all timbers too near the fire removed. If a mansion is undergoing thorough reparation, there would be perhaps no obstacle in the way of taking up all the hearths, removing all the grates and chimney-pieces, stripping the plastering off walls in the line of flues, and making a general search for wood beams, wood bricks, wood bond, and joint wedges; but I submit that in an inhabited house the occupier, as a rule, would prefer the risk of fire rather than have every room reduced to a state of chaos, and the fittings perhaps irreparably damaged. Nothing short of what I have described would render it certain that dangerous wood had been removed, and even then the flues themselves might be defective. I grant that no very great danger should be anticipated from the proximity of wood to the chimney-flues between the top of the wainscoting or skirtings and the ceilings or under side of cornice; but the element of danger exists all the same, for wood blocks have been found inserted over the fireplace for the purpose of fixing a chimney-glass or overmantel thereto, and wood blocks also for securing the bell-pulls, or bell-cranks; and I have myself seen a block of wood removed from a chimney-breast about midway between floor and ceiling, which went into a flue, and the existence of which can only be accounted for by assuming that it was placed there for one of the above purposes, or was the end of a putlog inserted at the time of building, and for some reason or other sawn off instead of being withdrawn.

The destruction of old country mansions may be traced usually to one or other of the following causes:—1. Lightning. 2. Constructional defects—that is, those which originate from improper construction, and which can only be ameliorated, viz., defective flues, fireplaces, and hearths (so called, but more truthfully bad carpentry in fixing wood contiguous to or into chimney-stacks and fireplaces), timber beams under hearths, or wood bearers for supporting the hearths, and carelessly-arranged heating apparatus, hot-air flues, hot-water pipes, and iron stove-pipes. 3. Spon-

\* A paper, by Mr. Thomas Potter, read at the meeting of the Clerks of Works' Association on the 4th inst.



taneous combustion. 4. Accidents, or, more properly speaking, carelessness of a more or less positive order, such as dropping lighted tobacco on carpets, smoking where there is straw from packing-cases and wine-bottle covers, shavings, or firewood, or in the lamp-room, overturning of oil lamps, setting light to window-curtains, reading in bed, insufficient control of lucifer-matches, carelessness with gas, leaving fires unprotected in the grates at night, carrying lighted benzoline or oil lamps and candles where straw or shavings accumulate from the unpacking of goods, and some others that would appear to rank next only to incendiarism.

With regard to lightning, this may be considered as one of the causes of fire, the danger from which may be reduced to a minimum by the use of lightning-conductors. But these may be rendered useless if not properly constructed or fixed, or if the area to be protected is guarded by only one conductor. The general rule appears to be to place a single lightning-conductor on top of the highest chimney, and this is assumed to be sufficient to protect the entire building, no matter how large, from the electric fluid, but the Lightning Rod Committee appointed by the learned societies to investigate the subject came to the conclusion that, although the highest point attainable was the proper one to fix a conductor, the area of protection was limited, and the line of limitation was obtainable thus?—From the point of the conductor draw an imaginary line at an angle of 45 degrees till it reaches the ground. The latter is on the circumference of a circle of which a perpendicular dropped from the point of the conductor would be the centre. The figure, in fact, would be a cone, the conductor point being the apex, and all the buildings standing on the base of the cone might be considered free from danger; of course there would be as many conductors needed as the magnitude of the buildings required. Where there are lightning rods, it is essential that all underground gas-pipes, water-pipes, or metals of any description be kept a respectful distance from the ends of the rods which are buried in the ground, or the electric fluid, instead of passing harmlessly away in the great storehouse of electricity, the earth, may get transmitted where least expected. With regard to defective hearths, fireplaces, and flues, it is estimated that about three-fourths of all the conflagrations in town and country arise from these causes. But the description of the cause of such fires is varied; sometimes we read of over-heated flues or defective flues, or, as at Ingestre Hall, from timber beneath the hearth-stone. Practically the fault is not that of the flues themselves, but of the careless manner in which timber is brought into almost direct communication with them. What is known as a "defective" flue may arise from various causes; it must be remembered that when the chimneys of old country mansions were built, climbing boys were their scavengers, and the conditions under which the soot was removed were far more favourable to that process than by the sweep's machine. Many of these flues are irregular in size, and usually much larger than the present ordinary house flues, and the result is, the sweep's brush, being too small for the opening, only dislodges such portion of the soot as it happens to come in contact with; and another disadvantage is that the sweep's brush is round, while the flues are square, so that the corners or angles of the flues seldom get thoroughly cleaned out. Still other disadvantages arise from the fact that these old flues, while they often travel for some distance in a perpendicular direction, suddenly go nearly flat, and form what the sweeps call "dead slants"; and as the elastic rods of the machine can only bend to a certain curve, the angles of these "dead slants" remain unswept, and, in addition, afford receptacles for an accumulation of soot, which, becoming heated, takes fire and smoulders for a considerable time. Occasionally there are in some chimneys what appear to be recesses made at the sides of the flues, probably as resting-places for the climbing boys; and these recesses and the "dead slants" are the points of danger, as the brickwork becomes hot; while the pargetting of the flue having probably been scraped away by the periodical application of the sweeping-machine, the mortar joints of the brickwork get, in course of time, partially disintegrated.

As an instance of the danger from these places, I remember, some years ago, a case where a strong smell of smouldering wood pervaded a bedroom of a mansion. After searching for some considerable time without success for the origin of this smell, smoke was seen to come up between the joints of the flooring; and on tearing up the boards, the mortar joints of the bricks between the floor and ceiling were found to have disappeared. On cutting a hole in the brickwork, a large quantity of soot in a burning state was found in a flue, of which these loose bricks formed a portion of the side wall. Of course, the inevitable shavings were discovered below the floor-boards adjoining the flue, and these were in a charred condition, evidently on the point of bursting into a flame. Now, had a general search been made for wood, no one would have thought of looking below the skirting-board for danger, especially as this flue appeared to pass in quite another direction.

Another source of danger in old mansions is the existence of bond timber in walls; this is practically unknown now in new buildings, but the builders of old were apparently profuse in their use of wood bond, and, unfortunately, they often, with the view of rendering it efficient, built it in the middle of the walls; and I

have found, during some alterations, bond in the centre of a wall within a few inches of a chimney flue, and blackened from heat. No search could possibly have detected the existence of this element of danger. Cliefden Mansion, near Maidenhead, was destroyed by fire in 1849, and attributed to wood bond timbers running into a flue.

Chimney beams, consisting of oak timbers 9 or 12 inches square, were usually employed instead of what we know now as the "chimney bar." I can find no record as to when chimney bars were first used; but wood beams are known to exist in houses less than 150 years old. All chimney beams that I have come across appear to have been fixed about 5 feet from the floor, and in many old mansions I have no doubt these beams still exist, a chimney bar having been subsequently employed without removing the beam, and a course of bricks built in between the bar and the beam, which would give about the right height for a modern grate. Now, when this beam is plastered on the outside and hidden from view, and a grate is perhaps badly fixed, leaving flat ledgments for soot to accumulate on the inside, we may guess the amount of risk incurred. Loughton Hall, burnt many years ago, is an example of a mansion burnt through the chimney beam taking fire.

An instance of the difficulty of being able, no matter how careful a search is made, to find out and remedy the danger existing from imperfect flues, occurred some years ago at a large public building in the North of England. I forget for the moment where, but at the time the hall was occupied by a number of people, when smoke was seen issuing from behind the architrave of a door, and on removing the same what is described as a "cavity" was found, into which burning soot had dropped, not, I believe, from the flue, but from a "pocket" in the chimney, the soot, it appears, having got there through the "with" or division between the flues and pockets having either got damaged or been improperly constructed. I think, therefore, we may safely assume that chimneys which have been built perhaps hundreds of years, cannot, under any circumstances, be vouched for as safe—at least, not from any amount of external examination; and this was my view when, some years ago, it became absolutely necessary to take preventive measures with regard to some suspicious flues.

My first idea was to cut away the breasts in the line of flues, and insert terra-cotta or fire-clay pipes the whole of the way, but the damage that would ensue in the execution of this project to costly finished walls, rendered it practically out of the question. I found, however, that the flues, although irregular in sectional dimensions, were in no case less than 18 inches square, and that they went much straighter than ordinary modern house flues, and with these two advantages ascertained, at some trouble, I determined to try and put a new flue into an old one by commencing near the top of the chimney. On the upper, or attic floor, therefore—making sure there was no timber above that point—I cut a chase into the flue 5 feet in length, and large enough to admit a flanged flue-pipe of 9 inch bore. Two pipes were then cemented together with a quick setting cement—Roman I think—so as to have them in lengths of 4 feet each. A long rope was passed through the pipes, and attached to an iron bar made to securely clip the bottom of the pipe. The 4 feet of flue-pipe was then passed down the brick flue, and another 4 feet having been cemented thereto, and allowed to get thoroughly firm, the 8 feet of flue was gently lowered, when another 4 feet was added, and the *modus operandi* was continued till the throat of the fireplace was reached. The rope had, of course, to be passed through each additional 4 feet of flue, and secured over an iron rod fixed in the brickwork above, while the cement joint was hardening. When an unfortunate "dead slant" was reached, there was no choice but to cut out the brickwork, have another start with the pipes, and make the connection between the upper and lower portions of the new flue sound and perfect with similar pipes, which was of course no great deal of trouble. On the face of it this would perhaps appear anything but a feasible project, but the actual result was a great success, as the breasts that had to be cut open were fortunately in rooms where it was of but little consequence. One flue I was enabled to pass down through a room whose height was 24 feet from floor to ceiling without disturbing the wall, a great piece of good fortune, as it was lined with marble for a considerable distance above the fireplace. Several chimneys were treated in this way, and all successfully. The Act of Parliament had occasionally to be evaded, as a boy was sent up, if needed, to "ease" the pipes whenever they took to lodging on any "set-off." It was of course necessary to allow the cement joints to get thoroughly secure before sending the flue on its way, and also to well secure the pipes at the bottom, otherwise the sudden appearance of the chimney flue tumbling into the fire might at some future time create some astonishment and alarm. The grates necessarily had to be taken out, except where they were not enclosed over the fireplace. This work was done ten years ago, and no bad result has followed—in fact, an advantage arose, inasmuch as the draught was increased. Before leaving this portion of my subject I might mention with regard to flue-pipes, as an instance of the difficulty with which any improvement is forced upon public notice, that the original inventor and patentee of pipes for use in the construction of flues found his invention so little appreciated that, after persevering for some considerable time he



was obliged at last to sell his stock for drain-pipes at a very reduced cost.

Some discussion has taken place at times as to whether flue-pipes cause the soot to drop into the fire, and I find this is so, unless a good long easy bend is given to the line of flue, and very much so if the flue-pipes are glazed. It is for this reason I assume that flue-pipes are now made unglazed. Circular or elliptic flues are necessarily much more efficiently cleaned than square or rectangular brick flues, and the up-draught is much greater. It is obvious that circular pipe-flues require sweeping oftener than the ordinary kind, at least where they are swept; for I know of a number of cottages built in a country village thirteen years ago where not one has ever been cleaned, for the occupiers, to show their confidence in the fire-resisting properties of their pipe-flues, simply push up an armful of shavings occasionally and burn them out; and the flames coming out at the top pretty regular is considered by the neighbours as evidence of the tidy habits of the respective occupiers. A good deal more might be said as to flues and flue-pipes, but not connected with fires at country mansions, and therefore inadmissible; but I have no hesitation in stating that whole socketed terra-cotta or fireclay flue-pipes, well jointed together and encased in the ordinary brickwork of a chimney, and the cavity between the perimeter of the pipes and the brickwork filled in with concrete made of coke and cement, are—as far as danger from fire is concerned—like “Cæsar’s wife,” above suspicion. Butt joint-pipes and socketed pipes with two sides cut off, cannot, I think, be considered so safe as whole socketed pipes.

In connection with brick flues there is another point as far as regards mansions in some parts of the country—viz., that a great deal of wood is often burnt, and that flues get foul much quicker therefrom than when coals only are used; and also that the resins contained in wood appear to create flakes of soot of large dimensions, and more readily inflammable than those engendered from the use of coals alone. Having made the flues all right, if the grate has to be removed for the proper fixing of the first flue-pipe, it will be well to search the fireplace opening for wood plugs, and, at any rate, to well parge or plaster both sides and back with Portland cement and sand made from crushed coke or broken bricks—a material which will stand heat as well as any I know of—and, if a chimney beam is found to exist, to have it out at any cost. Hearth slabs if cracked or showing danger may have to be taken up; but I suggest that a marble or stone curb, just now in common use in good houses, can be fixed; and if the hearth slab be of ordinary stone or other material of common character which it would be no loss to lose sight of, a tile hearth on half an inch thick of Portland cement bedded on the slab would render any danger from wood which may be beneath practically out of the question, and the inch higher which the hearth would be above the floor should not be noticed. As the fireplaces are mostly in or about the centre of the walls, and as the beams to carry the floor joists are usually also in the centre, it follows that the ends of the beams often run into the chimney, and should always be looked upon with suspicion, and have, in fact, been the origin of many conflagrations. Wood chimneypieces and overmantels—even wood coal-boxes—are all more or less “little helps” to a big fire, although not to be classed amongst the dangerous factors; so are wood dadoes, wainscottings, and skirtings, not necessarily of themselves so much, as the fact that they conceal the brickwork contiguous to chimney flues, and render the discovery of possible danger thereabouts difficult to detect. The battening and plastering—or, as is to be found in many old houses, battening and canvassing—of brick walls is fraught with danger, as not only are the walls most likely plugged with wood in all directions, but the battens being fixed vertically form so many shallow flues, up which and behind the plaster the flames have no check whatever. Had the battens been fixed horizontally this evil would to a great extent have been avoided.

Fixed marble or stone curbs in place of fenders are an element of safety, as pieces of burning coal or wood falling out of the fire and lodging beneath the ordinary metal fender and igniting the carpet is avoided; so also are the slow combustion grates, with the fire-boxes resting on the hearth, as the burning embers cannot by any possibility fall outside the fender curb.

With regard to heating apparatus of all kinds other than the ordinary fireplace grate, old mansions stand at a disadvantage, inasmuch as no provision was made in the more ancient ones for anything of the kind. Heating-stoves, whether of iron, fire-clay, or terra-cotta, are safe enough in themselves if care is taken that they stand clear of all combustible materials, but it is the iron flue-pipe necessary for carrying off the products of combustion which must be recognised as the dangerous element. If the iron pipe is led into a brick flue, the point of connection made sound, and no inflammable material within some feet allowed, they are of course fairly safe; but in Brecknockshire some years ago, according to a newspaper report, a fire broke out in a country church and was discovered to have been caused by a bird having built its nest at some point contiguous to an iron stove-pipe, which, when heated, set the nest on fire; here, however, wood must have been not far away, possibly the flue-pipe was carried up through the roof between the rafters, and the nest might have been in the roof and out of sight.

Hot-water and hot-air appliances are necessarily and usually only indirect causes of fire, inasmuch as the heat from the pipes and flues parch all woodwork they happen to be near, and render it therefore ready to ignite with the smallest provocation. In new buildings, of course, wood is kept a respectful distance from any danger points; in old buildings this is impossible, and walls, floors, and ceilings have to be cut away wherever required, and contiguous woodwork protected in such manner as seems most desirable. The small-bore or high-pressure hot-water heating pipes must be, I think, more dangerous in this respect than the larger ones. The question was raised some years ago, and it was attempted to be proved that wood might be ignited by being placed for some considerable time against a hot-water pipe, but this is not, I believe, now considered probable.

Hot-air flues should be constructed of some unflammable material, but I knew of one some years ago made of wood, but lined with the thinnest sheet iron, and which joined the heating chamber; when a “big heat” was got up, it was almost impossible to bear your hand on the wood casing. No expense should be considered in making the room where the heating furnace is placed, and the adjoining fuel room, perfectly fireproof. In old mansions these are generally placed in the basement, and often near the centre of the building, so that there should be as little loss of heat as possible from long flues or pipes.

(To be continued.)

### THE ORDNANCE SURVEY OF ENGLAND.

THE completion of the Ordnance Survey of Scotland has given occasion to some remarks upon the apparent dilatoriness with which the survey in England has been conducted. Major-General Cooke, the Director of the Survey, assigns the want of adequate funds as the cause of the delay.

The progress of the cadastral survey has depended, he says, entirely on the sums voted by Parliament for its execution, and it has always been the endeavour of the Director for the time being to get these sums increased. Until 1880, however, the greatest apathy prevailed in the country as to the progress of the survey, and it was impossible to get more money allotted to it. In that year the question of facilitating the transfer of land was brought prominently forward, and, as a good map of the country on a sufficient scale is one of the most important desiderata for dealing successfully with that question, the attention of the country and of Parliament was called to the great desirability of completing the Ordnance Survey at an early date and the apathy which previously existed was suddenly exchanged for an urgent demand for acceleration. At the rate at which the Ordnance Survey was progressing with the grants then allotted by Parliament, its completion could not have been looked for before 1900. Arrangements have now been made by which the cadastral survey, including the publication of the maps, will certainly be completed by 1890 and probably by 1889. A still further acceleration can be made if sufficient funds are provided, which will result in its completion certainly in 1889, and possibly in 1888.

The accuracy of the Ordnance Survey depends upon a complex organisation which cannot be suddenly and indefinitely expanded, and the Director considers that any further acceleration is impossible without a great increase in cost and a diminution in accuracy which it is difficult to estimate.

### THE ALBERT EXHIBITION PALACE.

THE first general meeting of the Albert Exhibition Palace Co. (Limited) was held last week at the Offices, Palace Chambers, Westminster; the Duke of Teck, G.C.B., in the chair. The President, in moving the adoption of the report, said he was glad to meet the shareholders, in compliance with the statute, even though the proceedings would be purely formal in their character, as there was no business to transact. The difficulties naturally incident to the formation of all large companies were numerous, and in this instance, owing to peculiar circumstances, they had been exceptionally great, but they had now been surmounted. Their main object was by enlightened management to promote technical education in the various arts and sciences among all classes, and to afford rational enjoyment and recreation of an elevating tone and character. The site on which it was intended to erect the palace was admirably placed, being within 100 yards of the York Road Station on the Brighton line, and within a very short distance of stations on the Chatham and Dover and South-Western Railways. There were also close at hand two steamboat piers upon the Thames, at one of which, he was informed, no fewer than 25,000 persons were frequently landed in one day. There were also tramway and omnibus services to all parts of the metropolis. The palace would overlook Battersea Park. The motion was seconded, and the report unanimously adopted. The President having expressed his readiness to answer any questions, a shareholder, who was a member of the Wandsworth District Board of Works, stated that there was throughout the whole of



that district a strong feeling in favour of abandoning the unmade portion of Warrener Gardens, in order to carry out the designs of the palace in their entirety. A resolution had been adopted at that Board in favour of that course, and he urged the council not to relax in their endeavours to accomplish this object. The proceedings then closed.

### EDINBURGH ARCHITECTURAL ASSOCIATION.

A MEETING of the Association was held on the 6th inst., the president, Mr. McGibbon, in the chair. The President stated that the Exhibition Committee were getting on very well with their arrangements, and there was every prospect of a successful exhibition. Promises of architectural drawings had been obtained from the principal architects in Edinburgh and London; and a large number were expected from Glasgow and elsewhere. The Duke of Buccleuch had promised the loan of some of the celebrated Canaletti drawings, as well as a model executed by Kemp; and proposed contributions had been intimated by Lady Ruthven, Lord McLaren, Professor Archer, Messrs. R. Phené Spiers, J. R. Findlay, and others. It had not yet been quite arranged who was to open the exhibition. The conversazione was to be held on the 22nd inst., and it was hoped that the President of the Royal Scottish Academy would perform the opening ceremony. Mr. Leonard A. Wheatley then read a paper on "Building and Architecture in Babylonia and Assyria." In the course of his remarks he gave an account of the Assyrian people and the sources of our information as to their history and architecture. "The large mounds on which the palaces were built were stated to be formed of bricks, and the inscriptions told of forced labour employed on them. The summit of these mounds was reached by flight of steps, traces of which were found at Persepolis. The plan of this palace showed the size and number of the rooms and courts. The method of transporting stones was described, and it was explained that the cities of Nineveh and Babylon were of such size that gardens and parks were included within their walls, and that the temples were of great height—two mentioned by Ferguson being of seven storeys. The houses were placed wide apart. The Assyrians, although conversant with the use of the arch, introduced it only for portals and smaller openings. The ceilings of their large halls were supported by wooden columns, the stone one of Persepolis having had, undoubtedly, a wooden prototype. The paper was illustrated by means of drawings and diagrams. A vote of thanks to Mr. Wheatley terminated the proceedings.

### SOCIETY OF ANTIQUARIES OF SCOTLAND.

THE first of the monthly meetings of the Society for the present session was held on Monday, Dr. Arthur Mitchell, vice-president, in the chair. The first paper read was "An Examination of the Newton Stone Inscription, Aberdeenshire," by the Right Hon. the Earl of Southesk. The Newton Stone had been 70 years known to antiquaries, and yet its double inscriptions had not been satisfactorily read. Through the kindness of Mr. Gordon, the proprietor of the estate on which it stands, he had enjoyed ample opportunities of studying the monument, and he had also had the advantage of photographs taken from new points of view. After an elaborate investigation of both inscriptions, letter by letter, he came to the conclusion that the Ogham inscription answered to the first part of the literal inscription only, that both these were renderings in a Celtic dialect of a brief sepulchral formula; but that the concluding part of the literal inscription was mythological—a religious invocation. The characters in which it was written, he thought, were analogous to the Greek letters written by Irish scribes in such early Irish manuscripts as the Book of Kells. The rendering of the inscription which was the result of his investigation in some respects closely agreed with that of the late Mr. Brash, and made it commemorative of "Eddi, daughter of Forrar, of the race of Jose," the last word being equivalent to Huas, the Solar god, who was the same as Dionysus and Bacchus. The Ogham part of the inscription, he thought, was for the priests, and the other part for those initiated in the mysteries. The second paper, by Dr. Daniel Wilson, Principal of the University of Toronto, Hon. Mem. S.A. Scot., was "A Notice of the Runic Inscriptions in St. Molio's Cave, Holy Island, Argyleshire." After referring to the interest excited by the discovery of the remarkable series of Runic inscriptions carved on the interior walls of Maeshow, in Orkney, Dr. Wilson remarked that the series in St. Molio's Cave, though fewer in number, were specially interesting as being, in his opinion, memorials of some of those who were engaged in the memorable battle of Largs. From the Norwegian account of King Hakon's expedition, we learn that after the battle the King sailed past Cumbræ to Melansay, or Molio's Isle, which protects the entrance to Lamlash Bay, and there lay with his ships for some days. The cave of the Celtic saint is little more than a sea-worn recess in the rock about 25 feet above the present sea-level, and would doubtless be visited by parties of the Norwegians seeking supplies of water from the Saint's well. The roof and sides of the

cave are covered with rude marks, crosses, monograms, and other carvings of different periods, and among these are several inscriptions in Runes, which were copied and deciphered by Dr. Wilson in 1850 and 1863. They consist chiefly of the names of individuals with the addition of the formula "carried this," but one seems to be of a satirical description. Dr. Wilson devoted part of his paper to a critical examination of the style and lettering of the inscriptions, and concluded with a description of St. Molio's chair, or stone bench, a projection in the cave which is thus named, and which recalls many other memorials of early Celtic saints of a like kind, which he instanced and described. He also called attention to the fact that the cave has attracted the attention of visitors, and that some of its interesting inscriptions have already been defaced. The third paper was a "Notice of the Battle of Glenshiel, June 10, 1719," by Alexander H. Millar, F.S.A., Scot.

### ANCIENT EGYPTIAN ARCHITECTURE.

A LECTURE was lately delivered at the Castle Museum, Nottingham, by Mr. R. Phené Spiers on "Ancient Egyptian Architecture." Mr. T. C. Hine occupied the chair, and briefly introduced the lecturer. Mr. Spiers reminded his audience that the antiquities of other countries faded into insignificance when compared with those of Egypt. Exhibiting a plan of that part of the country in which those antiquities were chiefly found, the lecturer described the configuration of the valley of the Nile, and said the principal historical monuments were to be found between Cairo and the second Cataract. The population of that land was at one time 7,000,000, but it had now dwindled down to 4,000,000. The Pyramids, their age and dimensions, formed prominent objects to which the lecturer devoted his remarks. The tombs and the royal chambers were spoken of in detail, and, in order to give some idea of the size of the Great Pyramid, he observed that thirty museums of the size of that at Nottingham Castle could be placed within it. The tombs of the kings and queens at Thebes were described, and attention was called to the remarkable skill in design and architecture which the ancient Egyptians possessed, as disclosed by the explorations of Belzoni and more recent travellers. The temples of Egypt, like those of all pagan countries, differed from Christian cathedrals, in that none but the king and the priests were admitted into them. The ruins at Luxor, containing representations of the victories won by Sesostris, were described, as were also those at Carnac. Of domestic architecture no traces remained, and all that could be gathered in this respect was what was to be found in the ancient monuments; but he would strongly recommend his hearers, if they should happen to be in London, to visit the approaching exhibition of Alma Tadema's pictures, for that great artist, though he had never been in Egypt, seemed to know more than any one else of Egyptian architecture. As regarded Cleopatra's Needle, the lecturer said that although it had been placed in a magnificent thoroughfare in London, he did not think the site, from an æsthetic point of view, was a desirable one. The chief essentials of Egyptian architecture were that they were designed with a view to produce a profound religious impression.

At the close of the lecture, a vote of thanks was proposed to Mr. Spiers by Mr. Fussell, and seconded by Mr. Felkin.

The lecture was illustrated by a large number of excellent drawings.

### THE WOOD STREET FIRE.

THE vast destruction of property in Wood Street, London Wall, and Philip Lane will doubtless not be without its practical lessons for those who are interested in this class of property. Many doubts will be set at rest—the relative value of fireproof construction, size of areas, well-holes, heights and cubical contents of buildings will be subjects of fresh investigation. Iron doors, double or single, appear to be of little use in stopping the progress of the flames. They are either split by the water when heated, or, as may be seen where they remain in position, they are so bulged that the flame licks round them and past them; while iron girders and columns, as their custom also is under fire, have twisted and buckled, dragging away walls in their writhing, which would otherwise have proved sufficient to prevent the spread of the calamity.

One noteworthy feature in this fire is the fact that the flames spread along the roofs and so downwards, parapet walls not being effectual when large masses of burning material were shot up and scattered broadcast over the whole area, portions of the burning debris being seen as far as St. Paul's Churchyard.

The number of warehouses destroyed is sixteen or seventeen, the total area of the damage being about 52,738 feet super. Messrs. Rylands & Sons' warehouses occupy the largest area, two of them being on the Curriers' Company's estate, whose picturesque hall so narrowly escaped, a portion of the roof to tower only being damaged by fire, and the remainder of building by water.

Large building operations will now speedily be put in hand. Messrs. J. & J. Belcher, the architects of the Curriers' Hall, and a large portion of Messrs. Rylands' premises, will rebuild the whole of their property. Messrs. Ford & Hesketh will no doubt be



engaged on Messrs. Foster, Porter & Co.'s, where the fire originated, the premises having been erected by them.  
 This is an excellent opportunity for the much-needed widening of Wood Street, an opportunity which may not occur again. From Messrs. Foster & Porter's corner to London Wall is nearly 400 feet.



#### New Museum of Science and Art, Dublin.

SIR,—With reference to your editorial remarks on the proposed new Museum of Science and Art, Dublin, at p. 359 of the *Architect* of the 9th inst., I am directed to point out that it is erroneous to state that Colonel McKerlie, the Chairman of the Board of Public Works in Ireland, was one of the Committee of Selection.

The fifth member was Sir George Hodson, Bart., so that all the members of this Committee were Irish gentlemen.

I am, Sir,  
 Your obedient servant,  
 Office of Public Works, Dublin: THOS. LONG, B.A.,  
 December 13, 1882. Private Secretary.

SIR,—In your article on the above subject the main point at issue has been completely overlooked. Public opinion in Dublin—and not, as you seem to infer, disappointed Irish competitors—has pronounced not only all the five designs unsuitable, but also the site on which the building was to have been placed.

The Treasury are in possession of a very large piece of ground, and adjoining premises could readily be acquired on moderate terms; yet it is proposed to squeeze the Museum into a corner, where it will overpower and darken Leinster House and Kildare Street, and the area of which is so limited that competing architects experienced the greatest difficulty in providing the stipulated 100,000 feet of floor area.

The learned societies of Dublin, the Royal Irish Academy, and Royal Dublin Society were not consulted either as to the site or designs; both the city members, and those for the University and County Dublin, were all ignored; also the Lord Mayor and Corporation of Dublin.

Surely the Dublin public and representative bodies like the above are not to stand by and allow "the Department" to force on them a Museum of incongruous design on a contracted and unsuitable site.

It is much better that the question should be fully debated and ventilated than when it is too late.

You object to the matter being reopened, as being unfair to the competing architects. No one wishes to act unfairly with them; by all means let them be paid liberally for their plans, for they are not to blame, as the choice of site did not rest with them.

You urge the Government to proceed with the erection of the Museum irrespective of Irish opinion; but you seem to forget that two years ago the designs for the Glasgow Municipal Buildings were found unsuitable. Mr. Corson, the author of the selected design, was paid the prize (750*l.*), and a new competition was instituted, with the result that Mr. Young's design was selected. If it was open to Glasgow to change its mind, Dublin has infinitely more cause for demanding the reopening of a question on which it was never consulted. Not only are the designs artificially restricted to an unsuitable site, but the space apportioned to the collection of the Royal Irish Academy is one-sixth of that actually occupied at present in the Academy houses and proved to be insufficient, some unique historic objects being stored in cellars.

I enclose a report of the proceedings at the meeting held at the Mansion House on the 25th ult., which will explain the state of affairs better than I can in a short letter. Dr. Lyons, M.P., the Lord Mayor, the Secretary of the Royal Dublin Society and Treasurer of the Royal Irish Academy, unanimously condemned the present scheme.

Having been appointed one of the committee to urge the authorities to pause before it is too late, must be my apology for troubling you with this letter.

Yours faithfully,  
 198 Great Brunswick Street, Dublin: JOHN L. ROBINSON.  
 December 12, 1882.

SIR,—Without attempting to prejudge or prejudice the case, it is only fair to the other competitors that assertions such as those contained in your last issue should not go unchallenged; but doubtless many, including the "other competitors," will be anxious to know when and to whom the announcement spoken of was made—viz., that Mr. Freeman's designs had been chosen by the "Committee of Selection"; and certainly the information as to Mr. Freeman's building being the best lighted, &c., &c., that is not in accordance with "general opinion." On one point I cordially agree with your correspondent, *i.e.*, a prompt

decision of the competition is desirable, in order to check a "spurious agitation," and, I may add, written self-praise, in favour of a particular design, which is manifestly unfair to the other competitors.

You will, I am sure, give as much publicity to this as to the letter of your correspondent.

JUSTITIA.

#### CHURCH BUILDING AND RESTORATION.

**St. Stephen's-by-Launceston.**—A contract for the restoration of this church has been entered into between Mr. Burt, builder, and the trustees of the church lands of the parish, and the work will be at once proceeded with under the direction of Messrs. Hine & Odgers, architects, Plymouth, whose plans have been approved by the Charity Commissioners. The contract amount is about 1,400*l.*, and provides for the renovation of the walls, roofs, and floors. The fittings and furniture will be provided by subscription. The church, which is of much historical and architectural interest, was collegiate before the Conquest. There is an arch on the north side, which was probably connected with the college, otherwise the present church is fourteenth-century. About eighty years ago it was badly treated: the roofs were then closed up with flat plastered ceilings, garnished with rosettes of the period. The open-timbered roofs will now be restored.

**Edinburgh.**—St. Thomas' (English) Episcopal Church, which was built in 1842 by the late Mr. Cousin, has been entirely reconstructed from plans by Messrs. Wardrop & Reid, architects. The original Norman style has been retained. Formerly the Rutland Street front had to be kept in conformity with the adjoining dwelling-houses, but now considerable modifications have been introduced. On this side a row of double-light windows, divided by stone mullions, and showing atop the round arch, have been constructed, and filled in with cathedral tinted glass. The pillared balustrade has given place to an ornamental frieze, and at the east end of the building a suitable doorway has been opened up, over which there has yet to be built a handsome porch. The interior arrangements have been entirely remodelled. The old high-backed pews have been replaced with more modern open seats of solid oak; the gallery has been narrowed, allowing more open space above the area—and the front done in oak, with arched panels. The fine Norman roof, formerly wainscotted, has been repainted in bright colours, bringing into relief its characteristic features, and imparting to the church a cheerful appearance. The arched windows above the cove have, like the rest, been filled in with tinted glass. A Norman arch with dog-tooth ornamentation, and supported by clustered pillars, has been constructed in stone to mark off the chancel from the church; the chancel roof has been groined, and at the back of this part of the edifice a stone arcading has been erected.

**Whitchurch.**—A new chapel has been opened at the work-house, built in old English brick and half-timber style, and furnishing accommodation for 130 persons. Mr. Walter Webb, of Whitchurch, is the architect. The contractors were Messrs. Corfield & Dodd, also of Whitchurch.

**Frodsham.**—The parish church has been reopened after restoration, carried out from the designs of Messrs. Bodley & Garner, of London, Mr. Speechley acting as clerk of works.

**Sudbury.**—The church of All Saints, which has undergone extensive restoration, has lately been reopened. The architect was Mr. Fawcett, of Cambridge; and the contractor was Mr. F. W. Jennings, of Sudbury; Messrs. Grimwood & Sons and Mr. E. Keogh—both of Sudbury—being entrusted with the stonework of the windows. The cost of the restoration is something over 1,000*l.*

**Southmolton.**—The church of Nymet St. George, known as Georgenympton, about three miles from Southmolton, has been reopened after restoration, which has been carried out from the plans of Mr. E. H. Harbottle, of Exeter, by Messrs. Luscombe & Son, builders, of Exeter, at a cost of 850*l.*; the total cost of the improvements amounting to about 1,000*l.*

**Walkern.**—The church of St. Mary, Walkern, near Stevenage, Hertfordshire, has lately been restored at a cost of nearly 2,000*l.*, under the supervision of Mr. H. R. Gough, F.R.I.B.A., the builder, engaged being Mr. J. Lister, of Aston, near Rotherham. The church was reopened on the 30th ult. by the Bishop of Colchester.

**Coggeshall.**—The Congregational Chapel, Coggeshall, has lately been reopened after undergoing works of renovation. Messrs. Gardner & Son, of Coggeshall, carried out the work, the amount of their contract being 1,350*l.* The plans were prepared by Mr. Charles Pertwee, architect, Chelmsford.

**Walkden.**—The new church, which has been opened, affords accommodation for 720 persons, and has been constructed of brick and stone, at a cost of about 2,000*l.* The architect is Mr. G. Fell, of Spring Gardens, Manchester; and the contractor, Mrs. Gerrard, of Swinton.

**Hamilton, N.B.**—On Saturday the memorial-stone of the new United Presbyterian Church at Burnbank, a mining suburb of Hamilton, was laid. The style of the new church is Early Gothic.



The tower is 14 feet square, and rises to a height of 127 feet to the top of the vane. The accommodation is for 562 persons, with provision for side galleries, giving a total of 654 sittings. The plans also show a hall seated for 136 persons. Mr. D. Macnaughton, I.A., Glasgow, is the architect. The estimated cost is over 3,000*l*.

### SCHOOL BUILDINGS.

**Bedwelty.**—A new infants' school for the Bedwelty School Board has been opened at Troedrhgwain, on land owned by the Tredegar Iron Company. The builder is Mr. W. Leonard, of Tredegar, and the contract amounted to a cost of about 5*l*. 4*s*. per scholar.

**Birmingham.**—New Baptist Sunday Schools have been opened at Sparkbrook. The schools, which adjoin the church, are Gothic in style, and provide accommodation for nearly 600 children. Mr. W. Hale is the architect, and Mr. W. Charley the contractor. The cost of the schools, including fittings, &c., is about 1,600*l*.

**Pensnett.**—A new Board school in connection with the Kingswinford parish has been opened at Bromley Lane. The new building will accommodate 400 children—viz., 280 in the mixed school and 120 infants. The cost is 4,000*l*. Mr. Thomas Robinson, of Stourbridge, is the architect, and Mr. Guest, the builder.

**Derby.**—Christ Church Schools have lately been reopened after extension and rebuilding, carried out under the direction of Mr. J. R. Naylor, architect, Tennant Street, Derby. The new schools, though accommodating 360 children—nearly double the number provided for in the old building—occupy the same space on the ground, and are not carried to so great a height. The cost of the work has been about 1,300*l*., at the rate of 3*l*. 12*s*. per head. Mr. Hewitt was the contractor for the general work, the iron roof being supplied by Messrs. Handyside & Co., the heating apparatus by Mr. Jerram, and the gasfitter's work by Mr. E. Haslam.

### NEW BUILDINGS.

**Poor-law Offices, Leicester.**—The foundation of the new offices has been laid. The buildings will comprise a Board-room, about 40 feet square, with which the offices of the clerk to the Guardians will be connected. There will also be offices for the superintendent registrar, vaccination officers, waiting-rooms, store-rooms, and other necessary apartments; and at one end of the Rupert Street elevation will be accommodation for the caretakers. The principal entrance will be by Pocklington's Walk. The front elevation will be in Classic style, of red brick, with Matlock and Bath stone dressings. There will be a stone plinth, pilasters, and a pediment over the principal entrance. The Pocklington's Walk elevation is about 80 feet in length, and the Rupert Street elevation over 100 feet, including the caretakers' rooms. The architects are Messrs. Redfern & Sawday; Mr. C. Wright, of Upper Kent Street, is the builder.

### ENGINEERING WORKS.

**The Channel Tunnel.**—The seven-foot heading of the Channel Tunnel at Sangatte, near Calais, has now been advanced to upwards of half a mile, and is progressing very satisfactorily. The Beaumont boring-machine is cutting at the rate of one metre an hour. The face of the heading is now perfectly dry, and is following a course halfway between the gault and the green sand, the inclination of the gallery having been raised slightly to avoid driving into the softer gault. Several faults of a few metres vertical displacement have been cut into, but no water of any great importance was met with in this broken ground. The quantity of water which found its way into the heading averaged every minute one litre per metre of heading driven, but this has been considerably reduced. The machine is cutting the ground so rapidly as to overtax the means at present available for removing the dirt, which is being done by manual labour. It is contemplated to employ ponies shortly for this purpose, and if the work is continued, the Beaumont compressed air locomotive will be introduced.

**Diaries for 1883.**—The manufacturers of diaries are earlier than usual in the field with their books, and the quantities which now appear suggest that the keeping of a diary is more common than formerly. Messrs. Hudson & Kearns have been inspired to greater efforts by the success of last year's diaries, and those for this year contain many improvements. The diaries for architects and builders contain, as usual, much of that kind of information which is most often in request, and the additions relating to legal matters are really valuable. The blotting pads of the firm are undoubtedly the best of all we have examined. It is needless to praise the diaries of Messrs. Letts, Limited, for they are universally known, and for general use they are never likely to be supplanted. One advantage they have is the superior quality of the paper. Messrs. T. J. Smith & Co. are always able to produce a large diary for a very low price, and in consequence can secure a large demand. Their diaries for 1883 are of various sizes and are all good as well as cheap.

### GENERAL.

**Mr. Connell**, of Newcastle-on-Tyne, has been appointed Quantity Surveyor for the Middlesborough New Public Buildings.

**Mr. John Bevan**, of Bristol, has been successful in an open competition for the completion of St. Paul's Church, New Swindon, and erection of vicarage. He has also recently been appointed architect for the new church in St. Andrew's Park, being the third church entrusted to Mr. Bevan under the Bristol Church Extension Commission.

**Mr. R. Medley Fulford**, of Exeter, read a paper on Brittany at the *conversazione* held last week by the Exeter Diocesan Architectural Society.

**Mr. Herbert Guthrie** at the meeting of the Liverpool Architectural Society on Wednesday read a paper, the title of which was "Heat from a Sanitary Point of View, and Some Features it may Introduce into the Architecture of the Future."

**Mr. William Morris** on Tuesday evening delivered an address to the students of the Leek School of Art.

**Mr. S. Thomas**, City Surveyor of Bristol, who was called in to adjudicate on the plans for a new market at Bideford, has awarded the first place to "Economy and Simplicity," the second to "Experience," and the third to "Devonia." The Bideford Town Council not being able to come to a decision, have decided to confer further with Mr. Thomas.

**The Leamington Corporation** on Monday determined to expend a sum of 2,000*l*. in ornamenting the front of the new municipal buildings.

**Messrs. R. Gay & Co.** are now manufacturing their well-known "flat" as well as "glazed." Both qualities have recently been used in painting Lloyd's Rooms at the Royal Exchange, and have given great satisfaction.

**Mr. J. E. Ellison**, ventilating engineer, Leeds, has had conferred upon him the highest award (silver medal) at the Bradford Industrial Exhibition for his conical-perforated bricks and "Radiator" ventilators. The bricks are being used in the Hull, Barnsley, Aston, Croydon, and other infirmaries. The "Radiators" have been recently fixed in St. Matthew's Church, Leeds, St. Mark's, Dewsbury, and numerous chapels, schools, &c.; and we are informed that they have given satisfaction in every instance.

**Limington Church**, Somerset, which was the first preferment held by Cardinal Wolsey, to which he was presented by the Marquis of Dorset, has been re-opened. The church had fallen into great decay, and in 1870 the chancel was rebuilt by the friends and neighbours of the then rector.

**Extensive additions, alterations, and improvements** have just been completed to Brampton Brian Castle, Herefordshire, from the designs and under the direction of Mr. T. Nicholson, F.R.I.B.A., architect, Hereford. The works have been very ably carried out by Mr. James Clutterbuck, of Gloucester.

**Mr. G. G. Hoskins, F.R.I.B.A.**, has prepared designs for the reseating, lighting, and ventilating Holy Trinity Church, Darlington. The work will be carried out forthwith.

**The Old Archbishopal Palace** at Croydon is likely to be removed, and the site used for cottages, unless the property can be purchased. The Ecclesiastical Commissioners are the owners.

**Messrs. R. W. Wynnfield & Co.**, of Birmingham (successors to Messrs. Camm Brothers), have obtained the Gold Medal at the Bradford Exhibition for their stained glass windows.

**The "Snape Memorial Window"** in the Cathedral of Newcastle-on-Tyne has been completed. It was designed by Mr. W. H. Atkinson.

**The Preston Town Council** on Wednesday decided to promote a Bill in Parliament for the improvement of the navigation of the Ribble and for the construction of docks.

**The Memorial Stone** of a new Established church at Oatlands, Glasgow, designed by Mr. John Honeyman, of Glasgow, has just been laid.

**The Dumbarton Burgh Buildings** were destroyed by fire on Monday. The School of Art, which was being constructed in the upper part of the buildings, should have been opened this week.

**The Northampton Town Council** have referred to a committee for consideration the question of accommodation at the Town Hall, which it is alleged is not sufficient for the requirements of the town.

**A Town Hall** is to be erected in Elgin.

**Efficacy of Steel Doors.**—On Saturday, shortly after the Prince of Wales visited the ruins of the fire in the City, Messrs. Foster, Porter & Co. were able to reach their "strong room," the entrance to which is secured by a pair of Chubb's massive steel doors. With very little trouble Messrs. Chubb's men opened the doors; and the room was then entered by the directors, who found all the contents uninjured. Several tons weight of books were quickly removed, and it may be mentioned that though there were safes inside the room, the books which were lying outside the safes were uninjured by fire.



# The Architect.

## THE ARCHITECT'S GHOST.



HE *cause célèbre* which has occupied one of the courts of law for so many weeks past, and which has aroused almost still more interest in the world of artists and connoisseurs, can scarcely have failed to awaken here and there behind the scenes of the architectural profession a peculiar kind of uneasy feeling, if no more. Is there or is there not such a functionary as the Architect's "Ghost"?

The account which has been given of the manners and customs of the Sculptor's Ghost is not only amusing, but dramatic. You ring the door-bell. A hatchway opens in the studio floor. A listening ear is strained. You send in your card. A silent shadow glides downwards through the floor. It disappears, and the flap closes over its head. You are admitted. You find the great artist absorbed in his great work, his spirit in the empyrean. You have to pull him by the sleeve before his thoughts return to the level of the earth and of you. But he is glad to see you, nevertheless, and glad to think that you are gladdened by the inspection of his great work. After a few happy moments you take your leave, and the silence of ineffable repose settles like a pall upon the chamber of imagery. The trap is raised again. The ghost reascends. The task which you have interrupted is resumed. Roman augurs winked to each other across the altars of the gods; but there is no winking here. When SOCRATES and his demon walked alone together, and worked out the secrets of wisdom, this was at least more akin to the transcendental brotherhood of the studio: the fashionable sculptor and the provider of "artistic assistance" work out in secret the mysteries of English statuary, and why should the world be any the wiser?

Whether there may be a great deal of truth in this, or none at all, we do not at present care to inquire; the case is one of those which, in a "commercial country," may be left to the judgment of commercial men. That is to say, when a product of even the highest art is, as a work of sculpture must always be, to the purchaser an article of trade value, it is useless for purists to pretend to shut their eyes to the fact that an occasional producer, if in any way conscious of his own deficiencies—and who is without them?—may easily persuade himself to supplement his own art by that of some artist "to the trade." The question, then, which we now propose for consideration is how far anything of this kind prevails in the practice of architectural design, and to what good end or ill.

Now we need not boggle at the admission that certain classes of architectural practitioners in a large way of business (this is the appropriate phrase, however vulgar some may think it) have done their designing wholly by other hands. Neither need we hesitate to declare that we do not wholly approve of this. The Architect's Ghost, in the eye of many a true critic, exists only to be denounced; like ARTEMUS WARD'S Indian, he is "pison wherever found." And we are glad to think that this view of the case is coming to be more cordially accepted amongst architects every day. In other words, the principle is being more and more widely and firmly accepted that the professed architect who does his designing by another hand, not because he has no time at command, but because he has no ability, is scarcely a true man.

There are "firms," for example, who "do" architecture as they "do" rent-collecting, valuations for probate, surveys of dilapidations, compensation claims, sales by auction, and (the connecting link) the laying out of land for building. The customers of such extremely commercial "houses" are not, however, deceived in architectural matters as the wicked say the fashionable sculptor is capable of deceiving fine ladies and gentlemen. The fact is generally pretty plainly stated that "we keep a gentleman who attends to our architectural department," and so the matter ends. There are builders also who "keep their architect;" but neither in this case is he a ghost so much as a sort of substantial artisan carrying off three or four sovereigns loose in his waistcoat pocket every Saturday at noon, and holding office subject to a week's notice on either side. The real Architect's Ghost is quite another kind of man.

Moreover, there are two classes of Architects' Ghosts, the indoor and the outdoor.

Now when an architectural practitioner is falling into the sere and yellow leaf, and is no longer physically able to work all night, or even after dinner, at the drawing-board—or when, although in middle life, he is so much occupied with the business of administration that he perhaps cannot sit down to the drawing-board at all—no man of common sense would grudge him the help which is to be obtained at the hands of an assistant of high class, who understands his manner, can interpret his hasty sketches, and has learnt to identify himself with his spirit. To such a lieutenant the ablest master may be permitted to hand his memoranda and dimensions, and his rough idea, as it is called, of how to treat the subject; and although the subordinate may not be able to do all that the master might, yet it may be felt that necessity has no law in such circumstances, and that it would be but an affectation to speak of the design as the work not of the one but of the other. Cases can even be imagined in which not a single line of the roughest of rough sketches has been done with the master's own pencil, and yet the product shall be his own as honestly as if he had worked out every part of it. The test is simply this:—whether he could have done it as well for himself had circumstances permitted; and the probability is that he could have done it better, and a great deal better. Indeed in architectural work this state of things may be recognised more readily than in almost any other kind of artistic work whatever. For the drawing is not in fact the design. Moreover, the design, if it be truly architectural—that is to say, constructionally rather than only superficially artistic—has in a great measure to work out itself rather than to be worked out, growing like the tree, from germ to sapling, from sapling to branch, and from branch to flower, by a natural gradation and development, in which, just as it alone works, the first inspiration contains within it the essence of all.

But the architect who employs the aid of a ghost is, as we have already hinted, the very respectable tradesmanlike gentleman who cannot do the design himself because he never knew how, and whose time is fully occupied by choice in what is called "getting the business." He is a sort of agent or traveller for architectural work; and so far, indeed, he is the right man in the right place; for all the fault we find in him is that he does not confine his pretensions within this very useful limit of fact, but considers it necessary to profess to do that also which he knows is beyond his power.

The ghost in such a case is, as we have observed, of one of two classes. Either a high-class assistant lies *perdu* in the office, in a position which is certainly humiliating, or a designer "to the trade" is employed, whose manner is strictly his own, and whose work in many instances can be as clearly read by those who are behind the scenes, as if they had seen him do it. Now both of these modes of proceeding, we are glad to acknowledge, are falling more and more into desuetude every day; and therefore, far from experiencing any desire to exaggerate the evil, we will now take leave to offer what may almost be an excuse for a practice which need no longer awaken the apprehension of those who wish well to the art.

For after all, as everybody knows, what the English public want from an architect is primarily the skilful and financially successful administration of their building business in one way after another, and only very secondarily indeed the introduction of the delicate finesse of artistic design. The profession of architects, consequently, as constituted by those external influences which are necessarily the strongest, is held to consist of little else than expert building agents. In nine cases out of ten, therefore, the clients do not care a button what means are adopted to put the polish on the plan, as they may be supposed to say; and as for being fastidious on the point of personal authenticity and individuality, the idea cannot be got into their heads at all; as even the late Mr. STREET came to know to his cost, when a churchwarden roundly told him one day that he understood a certain restoration was to be done, *not* for the sake of the architect's individuality, but for something much more intelligible.

We are not by any means afraid, therefore, of the Architect's Ghost. We can never cease to sympathise with that most estimable class of our highly educated younger men who are obliged to remain in the position of assistants year after year when they have long been perfectly qualified to do business for themselves, and we do not hesitate to plead their cause when they ask for more direct recognition than they receive; but



their case is one of the inevitable grievances of all business, and cannot well be helped. Nor do we fail to see the important use occasionally of the "architect to the trade," and certainly we cannot help respecting his abilities. As time wears on matters will, we hope, get better in many ways besides these, and the wise will wait.

A word more to those who are both wise and young. To get into good practice as an architect is, if the truth may be told so plainly, not so much a matter of skill in art as of aptitude for, as the bagmen say, "securing orders." It is easy enough to do the work; the difficulty is, how to get it to do. Look this fairly in the face, and many things are explained, and many offenders exonerated. We must take the world as we find it.

### THE RENAISSANCE IN ITALY.\*

THERE are few subjects which are more attractive than the history of the Renaissance in that country which of all others is most closely connected with the movement. But it would be impossible for any one man to write that history in its fulness, or even so much of it as relates to art. The evidence of what was done by Italian artists during a few centuries would have to be sought not only in out-of-the-way villages, but in all the galleries and museums of Europe. The lives of the artists have yet to be fully investigated, and the discoveries of Messrs. CROWE and CAVALCASELLE suggest how much awaits patient labour among records. The history of a single school—nay, often the history of a single artist—is enough to engross the attention of a writer, although he may have a German's industry; and it must be allowed that few of the books which treat of such fragments of the Renaissance can be said to be complete.

Mr. LEADER SCOTT suggests the vastness of the subject by calling his large quarto "An Illustrated Sketch," which does not presume to call itself a history. "It is only," he says, "a pictorial guide through the intricate mazes of the arts during the four centuries in which they grew, developed, and culminated." But his book is a guide which is comprehensive and impartial. It may be compared to the map of the world in an atlas, which enables us better than the other maps to understand the relative size of the various countries. From Mr. SCOTT's volume students can realise how much was done in the different schools of Italy, and it consequently forms the very best work which can be used by those who are about to commence the study of Renaissance art. Mr. SCOTT has had the benefit of Mr. CUNDALL's experience in the collection of illustrations, and it may be said that the woodcuts, while suggesting the styles of the artists, do not represent the works which are so commonly selected for the purpose as to become wearisome.

People speak of the Renaissance as if it were an absolute creation at some definite time, and a sign that the Dark Ages were ended. But it is impossible to fix the date of its origin. The forces of which the Renaissance was the result were always in operation. During the darkest period in Europe law was administered which was derived from Roman codes, there was a Roman language and literature used by the Church, and there was art which, however rude, represented Roman work. Europe, in fact, never lost its hold of that ancient civilisation which must be considered to be the main element of the Renaissance. The appearance of NICCOLA PISANO at the end of the twelfth century is, however, taken as marking the beginning of a new era in art, and although he may have had contemporaries who were equally influential, NICCOLA's name stands out most prominently in the history of the time.

According to tradition the character of his sculptured figures was derived from a study of a Greek sarcophagus, which stood in the Campo Santo of Pisa. But he was not satisfied with using classic work as a means of inspiration, he copied whole figures. The drunken SILENUS became MOSES, and the boy supporting the jolly but helpless satyr was draped and converted into a sort of acolyte. No satisfactory explanation of those wholesale adaptations has been given. They were most likely the result of poverty of invention and incompetency; but as NICCOLA is one of the patriarchs of art, it is almost a crime to suggest that he was deficient in ability. He may have thought that more value would be attached to work for which there was ancient authority; but whatever was the reason he set a bad example to those who followed him. We sup-

pose, too, that the introduction of voluminous draperies as a clothing for Scripture characters is owing to him. NICCOLA's prophets and saints are antique Romans in dress as well as in features, and the absurdity was perpetuated for many a century. Costume became conventional, and artists like MICHAEL ANGELO and DA VINCI in their representations of secular scenes drew forms of garments which were never worn by men. It cannot be said that the influence of NICCOLA upon painting and sculpture was altogether beneficial. In regard to architecture, Mr. RUSKIN characteristically declares that the first Christian architecture is to be seen in the cusped arches of NICCOLA's pulpit; but as so simple a form as a cusp was likely to be familiar to everyone who made circles with a pair of compasses, we need hardly go to Pisa for its origin, and we must seek elsewhere for the beginning of Gothic architecture.

GIOVANNI PISANO seems to have had more originality than his father. His adaptation took a different form, for the figure of a saint on the east front of the little Santa Maria della Spina in Pisa is a portrait of NICCOLA. The introduction of contemporary portraits in Scripture scenes was afterwards common enough, and sometimes it was employed to secure an unenviable notoriety for an artist's enemy. Mr. SCOTT says that the truths which the two great pioneers (NICCOLA and GIOVANNI) foreshadowed were "carried to Florence by ARNOLFO and ANDREA PISANO, and in that soil, so favourable to art growth, they developed into the great movement of the Renaissance." The influence of ARNOLFO in Florence must be recognised, especially upon the architecture, but it is not so clear about ANDREA. He co-operated with GIOTTO; but, as Mr. RUSKIN says, GIOTTO, while remaining entirely uninfluenced by the educated excellence of ANDREA PISANO, gradually bent the Pisan down to his own uncompromising simplicity.

There is some trace of classic art about the draperies of GIOTTO, especially in his sculptured figures, but he is rather to be considered as the first representative of that recognition of nature which is one element of the Renaissance. He was not a student of the nude, although in one of the campanile panels he shows the sculptor employed upon a nude figure. His attention was given rather to the life around him, exalting it while he depicted it, and in doing so he rendered more service to art than by imitating antique reliefs. "When one thinks," says Mr. SCOTT, "that until this time art was confined to conventional forms and unemotional figures, the life in GIOTTO's works becomes especially remarkable. Determined to bring the old Christian stories home to his beholders in a mode they can understand, he sometimes becomes too realistic to be quite scriptural—as in placing a maid spinning in the room next that in which St. ANNA kneels praying, and in representing the Holy Family in the flight into Egypt accompanied by serving men."

GIOTTO was the friend of DANTE, and his pictures may have been in unison with the poet's mind before he became a wanderer. But DANTE's rigorous justice—giving every man his desert and no more—is exemplified more in the fresco of the Campo Santo of Pisa, which is always likely to be attributed to ORCAGNA, than in any of GIOTTO's works. Life and Death, trim gardens that recall BOCCACCIO, chasms that open into the Bottomless Pit, demons who torture souls before hell is reached, monks in quiet convent gardens, hunting parties, and the horrors of lidless coffins are intermixed in this terrible picture. The Death Angel spares none but the monks and the wretched beings who—lame, blind, and deformed—vainly appeal to him from amidst a thicket of thorns. GIOTTO had too much human kindness to have painted such a scene; but, however fearful, it indicates progress. There is much realism in the costumes. Some of the figures are supposed to be portraits, and, according to Mr. RUSKIN, the mendicants "are among the first existing examples of hard study from the model." But in the landscape there is the usual conventionalism, and the birds and animals are painted regardless of scale. This picture, for moderns at least, is of great importance, for it is evidence of the heights and depths reached by artists when it was painted—that is towards the close of the First Era. Yet the authorship of it—whether it is by ORCAGNA, DADDI, or LORENZETTI—is never likely to be ascertained.

The Second Era—or "The Development," according to Mr. SCOTT—comprises a great part of the fifteenth century. Among the men who are representative of it may be named the architects BRUNELLESKO, MICHELOZZI, ALBERTI, the sculptors Ghiberti, Donatello, Luca della Robbia, Verrocchio, and the painters Fra Angelico, Squarcione, Jacopo Bellini,

\* "The Renaissance in Italy: an Illustrated Sketch." By Leader Scott. Published by Sampson Low, Marston, Searle & Rivington.



MANTEGNA, and SIGNORELLI. It was a time when Greek literature might be said to have been revealed to Western Europe. Before that time the few who were desirous to know Greek were compelled to journey to Constantinople, and, in consequence, the literature was almost unknown. On the capture of Constantinople by the Turks it was supposed by some scholars that darkness was again about to overspread the West. A cardinal who was afterwards known as Pope PIUS II. then wrote: "A little light will remain perhaps among the Latins, but that, I apprehend, will not be long, unless God from Heaven will look upon us with a more favourable eye." The fall of the city was, however, an advantage, for a number of learned Greeks fled to Italy, where they were well received. In Florence especially Greek literature, of which the great citizen DANTE knew little, was studied with enthusiasm. "The pursuit of the old learning," says Cardinal NEWMAN, "became a passion. As the crumbling cloisters of the East were ransacked, and manuscripts were found and deciphered, as the ruins of pagan edifices were excavated, mounds of earth removed, and the sculptures of classical art disinterred, an uncontrollable excitement, an intoxication, seized upon the classes which were engaged on the work. It seized upon young and old."

The artist, we are told, is the child of his time, and the power exercised by the new learning is manifest in the buildings, sculpture, and painting of the fifteenth century. In the decoration of the buildings mythology was blended with church history. On the façade of the Certosa or Carthusian monastery of Pavia, "medallions of Roman emperors and pagan deities fill the base, while statues of saints and martyrs fill the niches of the pilasters." The doorway from the Stanga Palace, which is also illustrated in Mr. SCOTT's volume, is covered with reliefs of classical subjects. We see the spirit of that age in the enterprise of SQUARCIONE, of Padua, who "turned his attention to the art of the ancients and travelled in Italy and Greece, bringing home various casts, made by himself in plaster from the beautiful antique statues which he saw." He was well rewarded, for no less than one hundred and thirty-seven scholars were attracted by the casts to his workshops. MANTEGNA, who was his favourite scholar, exemplifies the use which was made of SQUARCIONE's fragments of architecture and sculpture. His best known work, the *Triumph of Julius Caesar*, in Hampton Court, and the frieze in the National Gallery, could only have been produced by an artist who had antique details before him. The *St. Sebastian* in the Belvedere Gallery, Vienna, is suggestive of a model standing in front of some of the casts which had been specially arranged for the occasion. Nor is it too much to assume that the elaborate architectural backgrounds which are introduced in so many pictures of that time are also due to the interest which was taken in antique work. It would be difficult for a fifteenth-century student to bestow the least attention on fragments which were carved by Greek hands without becoming aware of the shortcomings of the figures which appeared in the Italian works of the First Era. There is consequently a marvellous contrast between the figure subjects of the fourteenth and those of the fifteenth centuries. But it is not all owing to the old work. The nude model was more often employed; and to it rather than to the antique may be ascribed the vigour of the works of SIGNORELLI, and the beauty of the idyllic figures of GIORGIONE. The fashion of introducing contemporary men and women into the pictures of scriptural subjects was not without its use. However incongruous a crowd of Florentines might seem in a picture representing a miracle of ST. PETER, it was requisite that they should be accurately represented, and in this way realism was encouraged. Many of the figures of the saints which now are supposed to be ideal were portraits. This is plain from one of SAVONAROLA's sermons, in which, addressing painters, he said:—"The young men say of this or that maiden, 'This is *Magdalen*,' or 'that is *St. John*,' because you paint figures in the church which resemble this woman or that. You painters act wrongly; you introduce worldly vanities into the Church." It was an age when many antagonistic forces were in operation. Nature and idealism, paganism and Christianity were contending, and it was impossible to foretell which of them was to be paramount. The precious manuscripts and works of art, which were sought after so eagerly, and were all but worshipped, could, at a monk's request, be tossed into the fire; a still greater spirit of sacrifice is evident when artists turned monks. On the other hand, the feasts of the heathen were kept like saints' days, and there was a

desire to revive the cultus of heathen mysteries. With so many and such discordant elements existing in the "Development," it is not surprising that signs of decay appeared soon after the Culmination of the Renaissance.

That Culmination forms Mr. SCOTT's Third Era, and in the opening chapter upon it he mentions one circumstance which is somewhat remarkable:—

A study of the chronologic lists given in this book will show a curious fact, that the beginning of each century marks a crisis in art, and that the intermediate years lead up to that crisis. The year 1300 marks the very centre point of the careers of GIOTTO, DUCCIO, and SIMONE DE MARTINO in painting, and of ANDREA PISANO in sculpture. In 1400 FRA ANGELICO, the greatest purist, and MASOLINO, the leader of the naturalists, had just begun to win fame as painters. Ghiberti was beginning to be known as a sculptor. During the whole century their scholars were aiding in the great movement, and the year 1500 saw the climax of art. At that time all the groups of men of genius which mark the Culmination were gathered together in Florence.

— The works of the artists of the third period are of course better known than those which were produced in the earlier periods. The men themselves were entitled to be called many-sided. One of them, LEON BATTISTA ALBERTI, the architect, was a "brilliant courtier and artist, who could tame a horse as easily as he played his lute, and could pierce his adversary's armour in the lists as calmly as he designed a fine building in his studio." In versatility he was surpassed, however, by some of his contemporaries, and indeed it may be said that if there had been less of that quality it would have been better. The greatest genius of that age, or indeed of any other, was DA VINCI, yet how marked is the contrast between his powers and his performances!

In describing the Third Era Mr. SCOTT devotes a great part of the available space to a consideration of what was done by MICHAEL ANGELO, RAPHAEL, and TITIAN, and to be acquainted with their works is to possess the key to the art of that and the subsequent age. Mr. SCOTT is not carried away by his enthusiasm. He recognises the fact that the greatest artists of the Culmination were sometimes dangerous guides to follow. Thus, in speaking of the Sistine *Last Judgment*, he says:—

As a lesson of Christianity it falls dead; that which inspires only awe can never teach the religion of CHRIST. In its influence on art it is almost as deadly; the great power and terrible charm attracted a crowd of followers, but in their hands the force of MICHAEL ANGELO, without his intense spirit, became coarseness, just as the tenderness of RAPHAEL, in his followers, without his sentiment, became weak sentimentality. Thus, the two greatest artists, by their very inimitable perfections, were the starting-point of the decline. MICHAEL ANGELO's own words "My knowledge will give birth to a tribe of know-nothings," have proved prophetic. That which in him is sublimity, becomes coarseness and audacity when imitated by lower natures.

These words deserve attention at the present time, when so much is heard about the benefits that are to be derived from a study of the works of MICHAEL ANGELO. To a man of congenial spirit they may be inspiring, but in other cases their value is less evident, and one of the most absurd sights is to see a student whose capabilities are fitted to deal with homely things aping the terrible manner of MICHAEL ANGELO.

It is mysterious and inexplicable to find the Culmination of art succeeded by the Decline. No man was able to take the torch from DA VINCI, RAPHAEL, or MICHAEL ANGELO; and although art was fostered genius could not be created. However interesting to the philosopher, the fourth period was not productive of the Baconian "fruit," and the student may ignore it without loss. Mr. SCOTT does not occupy many pages with his history of "The Decline," and we admire his judgment in being reticent. The needs of the student have been kept in view throughout, and in consequence men who are unworthy are not brought forward into prominent positions, as they are in some books on the Italian Renaissance.

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The Royal Manchester Institution on Wednesday awarded the Heywood gold medal to Mr. H. Clarence Whaité, for his drawing of *A Stronghold of Edward I.*, which found a purchaser at the opening of the present exhibition at the price of 262*l.* 10*s.* The medal is the twenty-ninth and last awarded under the old constitution of the Institution, and founded by Sir Benjamin Heywood in 1834. Mr. Whaité took the gold medal in 1862 with *The Rainbow*, and the Heywood silver medal in 1854 with *The Expulsion from Paradise*.



## FIRES AT COUNTRY MANSIONS.\*

*(Concluded from page 387.)*

HAVING travelled over most of the ground relative to fires which originate from constructional causes, and which probably are the origin of four-fifths of those which destroy country mansions, we come to spontaneous combustion. Although in warehouses and shops, where oils and general merchandise are kept, spontaneous combustion is recognised as an occasional cause of fire, it can scarcely be considered as a very dangerous one in the case of country mansions, and probably there are only two ways in which it might occur. The rays of the sun on a hot day have been known, where the windows face the south, to become focussed sufficient to ignite woollen materials lying on dressing-tables. This is not a usual circumstance, but it has been the cause of fires, and at any rate might be avoided in hot weather by covering up the dressing-tables with some less inflammable material. But where spontaneous combustion is more likely to occur is in the lamp or oil room, where lamp oils, oils for domestic use, cotton waste, lampwicks, and oily rags predominate, and where the lamp-trimming business is performed. Here the lamp-room should be fireproof in all respects, and have an iron door leading therefrom, nor should it communicate with any other apartment. No more rags, dusters, or cotton waste should be kept than necessary, and the lamp oils should be kept in closed iron tanks. To show the possibility of a fire from spontaneous combustion I take a case which occurred in 1854:—"Shortly before the fire at Gloucester Cathedral the workmen who had been engaged in polishing the throne, and other carved woodwork in the choir, left off, it being six o'clock. Three hours afterwards the fire was discovered in a pew in front of the throne, where they had left their tools and materials. The men had been employed in applying boiled oil and turpentine in equal proportions to the woodwork, rubbing it with dry cotton rags, chiefly portions of old cotton stockings. These, after use, were placed in a rush basket and set on the pew in front of the throne. This was exactly the place where the fire broke out three hours afterwards."

"Experiments have been made with the view of ascertaining distinctly whether the fire might not have been caused by spontaneous combustion. The men employed placed their rags, saturated with oil and turpentine, in a rush basket as before. In an hour the outside of the basket was found to be warm, and soon after the rags began to smoke. In two hours a continuous and strong cloud of smoke escaped from the basket, and in three hours the whole burst into a flame. This experiment, we are told, was tried twice with the same result, and it fully accounts for the fire at the cathedral on the 8th inst., and doubtless for many others."

Assuming this to be substantially correct, and there is no reason to think otherwise, but little more need be said as to spontaneous combustion, except that when the origin of a fire is attributed to some unknown cause this may have had something to do with it.

With regard to accidental causes of fire at country mansions, these range from cases beyond personal control, such as stumbling and upsetting oil lamps, to those that come almost within the range of incendiarism, and at any rate are cases of gross carelessness and want of common sense. What for instance can be said of a man who would blow out a gaslight and leave the gas not turned off in an unfrequented place? But I have known this in a mansion, and unfortunately we read of many accidents from people who will take a lighted candle or lamp to find out the cause of a gas escape. One of the leading insurance companies stated at a meeting of the shareholders soon after the introduction of lucifer matches, that that invention cost them 10,000*l.* a year extra for compensation. But the danger from lucifer matches might be almost entirely avoided if the safety matches only were used—those which are stated to "light only on the box." Rats will run away with lucifers if they find them, and in their progress through small apertures it is not at all unlikely they may rub against a piece of wood and ignite the phosphorus, which would cause the rat to drop it at once and leave it burning. Wax tapers are worse still, as to an enterprising rat they are objects of special research, and afford him quite a banquet.

The introduction of dinner lifts and luggage lifts into old mansions—some of them reaching from the basement to the attic floor—are dangerous should a fire break out in the former, as nothing better could be devised to rapidly carry the flames from the lower to the upper regions, and all intermediate combustible spots. Iron flap doors should be adapted to each floor to close the well-hole of the lifts, but I believe this is very rarely done. Gas meters should be attended to by day, and the gas at meter should of course be turned off at night; and, in case of fire, notice conveyed to the gashouse at once that it may be shut off there also.

Plumbers working on roofs using fires for their hot metal are credited with being the originators of many fires—Canterbury Cathedral a few years since to wit.

From the prevention we now come to the extinction of fires, which must be of course a matter entirely different from the

system adopted in towns. A large cistern or cisterns on the roof from which iron mains shall lead through the building, and to which hose pipes placed in convenient positions can be attached—say in every corridor and on every landing—has been recommended; but this cannot be considered sufficient, for old mansion roofs were never made to carry a heavy additional weight in the shape of tanks of water sufficient to put out an extensive conflagration. Every 1,000 gallons of water weighs 4 tons, and nothing less than 20,000 gallons should be available for fire purposes; moreover, the friction and consequent loss of head or power would render the fire hose of very little avail in the upper storey. Fire hose or hydrants inside a mansion, no matter how supplied with water, would, I think, be unsafe to rely upon entirely; for instance, assuming the fire to break out in the night, and to have gained some headway, the half-dozen or so indoor men-servants would probably think more of their own safety than in forming themselves into a temporary fire brigade; or the state of terror which such a disaster would occasion in the dead of the night would entirely prevent them doing what was most needed and at the precise place, while those outside who were brought to the building by the alarm of fire would be quite incapable or unwilling to thread their way through the intricacies of winding passages and corridors.

A considerable amount of public attention was some years ago given to a means of stopping a conflagration by the use of vessels containing certain chemicals, which, on becoming mixed by means of a blow given to a spring attached thereto, generated a powerful gas. This was proved to be far more effectual in arresting a fire than water; but unfortunately the effect would be as fatal to the user as to the fire, and to remedy this goggles have to be put over the eyes and a shield tied over the mouth; the vessel is then strapped on the back, knapsack fashion, and with the nozzle and diminutive indiarubber tube in hand the process of fire extinguishing is performed. Although no doubt effectual at the commencement of a fire, it is apparent this can be of no use if it has assumed serious proportions, and the dangerous nature of the contents would prevent many from having such a fatal material strapped to them. Still, it is a useful machine—a "little help"—and might, and perhaps does often, prevent a "bigger help" being needed. A suggestion was made in one of the journals at the time when it was thought that this gas was going to prevent all extensive fires in the future, to confine it in tanks at various points and lay it on to every room of every house, to be turned on with a tap where required, as with ordinary gas or water. Possibly the householders of the period thought it was as pleasant to run the risk of being burnt to death as to be asphyxiated by any slight escape or accidental turning-on of the gas. But this perhaps was quite as sensible a suggestion as one by another writer, who, after a large fire in London, seriously proposed that all the water mains might be laid along the streets on top of the houses, so that someone had only to go on the roof and turn on a large tap, and what at the commencement was a fire, would in the end become a deluge.

Equally as useful are the small hand-engines on two wheels, which can be carried or wheeled through any door, but must necessarily be supplied with water from the nearest taps by means of buckets. The advantage of these little engines are that the water can be directed to a considerable height, where, perhaps, it would be impossible to reach—or the heat would be too great to approach with ordinary hand-buckets. It is needless to say that where a smell of burning wood is discovered and cannot be detected, the spot should not be left night or day—for it might smoulder for many hours—and that water should be got ready for immediate use if required.

But there are many mansions where scarcely any facilities exist for the extinction of fires; and, on the other hand, there are many where every possible means within reason are adopted, and if I describe the means at one of the latter class that comes within my knowledge, it will answer the purpose as well as any other I can adopt.

My typical mansion stands on an eminence miles away from any fire-engine. Below it runs a river, and behind, but about half a mile distant, the ground rises very considerably. At the river-side and at some little distance from the mansion is a water-wheel, and formerly this wheel was the motive power which forced the water from a shallow well near the wheel, to a cistern on the roof of the mansion. At present an Artesian well near to the water-wheel supplies the water, which is forced by the wheel and a treble barrel pump through a 4-inch cast-iron main to a tank made in the ground on the distant hill three-quarters of a mile away, 40 feet above the level of the highest part of the mansion, and holding 20,000 gallons. About half-way between the water-wheel and the tank, and at the nearest point to the mansion, a 4-inch branch is taken off the main, and carried first all round the mansion, and then in the building to ordinary domestic service cisterns on the roof. On its way to the roof 2-inch branch pipes are taken off, and to these branches are attached hydrants at various landings and accessible parts of the building. On the outside, hydrants are placed in the ground about 60 feet apart, attached to the 4-inch pipe. The underground tank, holding 20,000 gallons, in addition to serving the mansion with water for domestic

\* A paper, by Mr. Thomas Potter, read at the meeting of the Clerks of Works' Association on the 4th inst.



use, supplies also a farm and all the buildings which the pipes pass on their way from the pumps. But as the water in this tank is being continually drawn for general use, a larger open reservoir, holding 100,000 gallons, has been made near thereto, the water in which is entirely reserved as an auxiliary supply in case of fire, and is prevented from entering the main by a stop-cock placed on the same. Three hundred feet of fire-hose with nozzles already attached hang on pegs just within the building for the outside hydrants, and other hose pipes are suspended over each of the inside hydrants. Here then is every facility for discharging an immense quantity of water on the highest part of the building as soon as the hose can be attached to the hydrants. But, in addition, fire-buckets hang in a row in the hall; electric alarm bells are fixed to each external doorway; a fire annihilator stands ready to be buckled on any one who has no fear of being asphyxiated; telephonic communication exists between the mansion and the stables, the home farm, and the clerk of works' house, so that help could be obtained quickly; also telegraphic communication to the nearest town; a watchman perambulates outside the building all through the night, whose movements are known by a tell-tale clock, the register of which is carefully taken every morning; and fire-ladders also hang up adjoining the house, and which will reach to the roof.

Of course, in case of accident, there are stop-cocks at different points of the main. But these are usually kept open, and in addition a white post is placed against each, on which is distinctly painted "Fire cock, turn left to right," and the keys for these hang at the nearest convenient place, well known and constantly in sight of all whose business brings them near thereto.

It is obvious that in the case described the conditions are favourable for an efficient supply of water at high pressure. Were no such facilities available, a steam-engine would of course be necessary to pump the water, and a water-tower built, having a large iron tank on the top.

I am told that the cost of maintenance of the whole system of water supply and distribution described does not exceed 100% a year, excluding the wages paid to the watchman, which are not taken into account, as his functions are more especially to arrest the progress of any one having burglarious proclivities. I might incidentally mention with regard to the appliances in use for the protection of mansions from fire, that both leather and india-rubber hose are unsuitable, not only on account of their weight and cumbersomeness, but more especially because they are liable to crack when not in pretty constant use; and that the best for the purpose is "Vaucher's canvas hose," which is light, economical, and capable of standing a high pressure of water. The water in iron mains should not be allowed to remain there more than a month, otherwise the oxidation of the iron has an injurious effect upon the hose when the fire appliances are all under trial, which, of course, should be at stated intervals.

But there is a weak link in the chain, even in the arrangements I have just described; for should a fire break out in the night, some considerable time would elapse before sufficient help could be obtained, and in the meantime, unless kept in check, an uncontrolled fire raging in the midst of a mass of parched timber and other combustible materials would probably defy the endeavours, no matter how energetic, of men with no experience as firemen. This is a difficulty not easy to cope with, although I believe an instructor is sent from the London fire brigade to many private residences in the country at a low charge, to give instructions how to act in case of fire. It is a well-known fact, however, that many persons when called upon in an emergency at a moment's notice to assist at some sudden calamity for which they have had no intimation and no previous experience of a similar character, "lose their heads," and some extraordinary tales are known and told of the doings of people placed in that position. Incidentally I might mention that formerly the members of fire brigades in country towns (and London also most probably) were selected from mechanics and others employed in building operations, probably because they were more accustomed to "run ladders" than any other class, and I believe this system still obtains in some parts of Germany and other portions of the Continent.

It is passing strange the money expended on ways and means for the prevention of fires, and of the actual money loss sustained through fires, and yet to find that nine-tenths of the buildings erected appear to be built expressly to be burnt. Let the casual observer take his stand in an ordinary building when "in carcass," before any plastering is done or flooring is laid, and look around him: he will find the wood very fairly distributed for a good fire—or rather a bad one; and then let all the wood that is to come in for finishing be distributed about—plastering laths, floor boards, doors, stairs, skirtings, fitments, &c.; then add the wood furniture, and he will behold—

Wood to the right of him,  
Wood to the left of him,  
Wood in the front of him,  
Wood everywhere.

I find in a country house just erected, and standing on an area measuring 56 by 36 feet, that the actual weight of wood of all description used in construction thereof is about twenty-nine tons. Now what chance is there of checking a fire which, unobserved, has made considerable headway in an area of 224 superficial yards,

in which there is heaped up as much wood as took twenty-nine horses to draw there, and no means of obtaining water except as much as can be pumped up by an ordinary hand-pump from a well?

A writer in the *Manchester Courier* some years ago stated that in Japan the law was that the occupier of every house burnt down, whether accidentally or otherwise, should be beheaded, and the same writer follows up this statement by gravely remarking, "There are very few fires in Japan." Now this law might be profitably copied in this country with certain amendments. For instance, transfer the onus of responsibility to the builder, make the law provisional, say for the next twenty years, and to apply only to buildings erected after the passing of the Act. This would do more towards rendering our habitations fireproof than all the moralising and preaching that has taken place these last forty years; and when once fireproof buildings were found to be as easy to erect as combustible buildings, no one would occupy one of the latter, with the chance at some future time of being roasted alive. I grant builders would raise personal objections to an Act of Parliament that would virtually hang the sword of Damocles over their heads for the rest of their days, but every national benefit must of necessity press heavily on an infinitesimal portion of the population for a time. Seriously, the saving of valuable property and valuable lives, simply by making our habitations to all intents and purposes fireproof, will not be accomplished until it is made penal to build them otherwise. The thin edge of the wedge has been inserted in certain rules and regulations laid down by the municipal authorities in large towns with regard to the use of wood in buildings; but beyond this, with our national disinclination to do matters different from our forefathers, no further steps will probably be taken to prevent loss of life and property from fire for the next century or so.

I must plead in extenuation of all weak points contained in this paper, that it is a subject upon which, compared with many others, but little has been said or written; on that account, however, perhaps it may be the more interesting to the members of this Association. At any rate, if it be the means of helping to prevent in the future such losses as have lately occurred in the burning of Ingestre Hall and Clevedon Court, my time will not have been wasted in drawing attention to "Fires at Country Mansions, and Suggestions for their Prevention."

At the conclusion of this reading a hearty vote of thanks was accorded to Mr. Potter for the very able manner in which the subject had been brought before the members.

The discussion of the paper was postponed until the next monthly meeting.

## THE PROGRESS OF ART.

AN address was delivered lately by Mr. W. B. Richmond at the distribution of prizes in the Salisbury School of Art. He said: A few weeks ago I was standing among the columns of the Parthenon at Athens; several hours, indeed several days, I spent there, and they naturally made me think a great deal and very seriously about the occupation of my life. I came to the conclusion that a great artist must be the possessor of three faculties: he must be a poet, a philosopher, he must be a workman. Now with regard to Greek art, about which I shall speak to you first, we cannot understand that duly and properly unless we understand something of the occult subtilty of the Greek mind. We cannot understand that beautiful building the Parthenon without we understand something of science, and we cannot understand the marvellous union that there is in that building of scientific truth and of exact proportion unless we know something of the marvellous subtilty of that construction. Now I may tell you an astonishing fact about that building, and this is the preface to the other remarks I shall make concerning art—that in that building of the Parthenon there is not a single straight line. This is designedly so. We shall see as I go on how such subtilty of invention on the part of the architect, also on the part of the sculptor was carried out; and although we know little about Greek painting, in all probability, from what we do know of it from the writings of Pliny, that same subtilty of invention and execution was existing. For the workman, the builder, it would be impossible to go to a better school than is contained within the walls of that ancient building. I climbed to the top and paced among such stones as had not been injured by the numerous earthquakes with which the city has been pursued, as it were, for many centuries, and so beautiful is the building of that temple that you cannot put a penknife between the stones. Now you must remember that these stones are not fastened together by mortar; they are simply placed one on the top of the other, and every one of those huge blocks of marble has a small portion of the curve in its short line, which dominates the whole line of the building. Here is the design. Where is the art? Why in standing among those mighty columns a sensation of pleasure, of dignity, and repose comes over the soul of man that it is impossible to explain. Is it alone association? Is it only because among those columns some of the greatest thinkers of the world have stood? No; it is not alone that. It is because the dominant feeling in the mind of the architect who designed that building was nobility. But there was another



feeling, and that feeling, which has always prompted the highest art in all times of the world, a religious feeling. The Parthenon was the sacred temple of the Athenians; it was to be the most beautiful temple in the world, it was to be perfect in every respect—absolutely perfect in design and construction, because it was a sacred place. So much for the building.

Now let us come to the sculpture. Not only was the place to be absolutely beautiful, but the first sculptor of the age, Phidias, was employed to adorn it, and let me tell you with what hearty and artistic fervour he adorned that building. High up, almost out of sight, were the figures fashioned, and placed there never to be seen in certain views after they left the study of Phidias, never to be seen again absolutely and entirely. Indeed it was not until the figures now standing in our British Museum were taken down that any idea could have been formed as to the minuteness of the exquisite workmanship of them. In conception they were perfect, and in execution they were equally perfect. I will give you one little instance. In one figure is a small portion of drapery hanging over the foot, which never by any possibility could have been seen from below, and yet with religious fervour the sculptor has finished this little bit of drapery with as great minuteness as the carver would have fashioned the smallest piece of his work. This union of great conception and minute workmanship has always existed in the greatest times of man.

And now let us leave the Greek work and travel on to Roman. The Greek was a lover of beauty, but not so much of character. The Roman was a magnificent workman, but he had no ideal; for any ideal he had to go to the Greek. He had little invention in art, but he had a marvellous power in realising character. In the splendid busts executed in the best time of Roman art you have clear, characteristic portraiture. Probably the world has never seen better; but there is no ideal, no romance about the Romans. The time comes when romance in art seems to be wanting. We pass over that period of time, and we naturally come to St. Mark's, of Venice, where we see the culmination of all the romantic. There we see perfect design, perfect execution, fanciful ornaments, playfulness of design, perfectly unrivalled in the world. Art was put aside, it appeared almost dead at the time, until the great workman came from Constantinople and made the basilica of St. Mark. There was next to no art in Italy. Then the great artists scattered themselves over Italy. Cimabue and Giotto were outcomes of this class, and by degrees, by the accumulation of true science, the country retained the impulse towards the beautiful and did not allow mannerism to stand in the place of spontaneity of motive and progress. She kept head knowledge without losing childlike simplicity until the great culminating moment came—probably the greatest event the world of art had ever seen—when Michael Angelo came to light. Here we seem to stand on the border of an abyss; it is so splendid, so ideal, and yet so natural, that in studying his work one cannot but feel that a step further in either direction will throw his work into something of a monstrosity. And this happened: because those painters who followed Michael Angelo, not having his genius, his simplicity of mind, and his knowledge, copied his things and produced exaggerations—for they always were exaggerations—and so degraded that which in point of fact was only grand, and thereby they made caricatures; so art died out. But there was a moment in Venice when realism came in for a time; for the study of nature after all is the only safe ground on which we can tread. It is no use having fanciful ideals; we must reduce our ideals to fact. We are dealing not only with ideas, but we are dealing with the close facts of nature, with which our ideas can be compared. Now, ladies and gentlemen, it is about this subject of the study of nature that I should like to have a little talk with you. And let me talk with you as if you were all painters and I were simply another painter standing up amongst you.

I know by experience that the intimate and daily study of nature is the only chance for the artist, but how is he to go about it? Sometimes I think I do not know myself. I disagree—and here I must be egotistical—in a very large measure, with what is called the modern system of art education. I disagree entirely with that habit of making elaborate and simple drawings from any inanimate object. I think it a waste of time. I think that what an artist should cultivate as much as possible is certainty and yet rapidity of execution. All the beautiful effects of nature, all the most beautiful actions of the human body, all the most beautiful expressions of the human face are extremely fleeting, and if a young man accustoms himself to catch them coldly and coolly, to go half asleep over a simple drawing, however beautiful is his production rather than awakening his faculties he is deadening his faculties of perception. However beautiful his drawing may be ultimately when finished, I do not think that such a student has added to his artistic faculties one jot. I am obliged to say what I think, because this is the only way in which any remarks of mine can be of any use. Now I have said that all the more beautiful things in nature are those that are passing. And how are we to cultivate that rapidity of hand which would enable us to express with certainty and precision that which our eye perceives, and which we long to execute? It is a matter of habit; it is distinctly a matter of habit—a thing which any young student can cultivate. My advice to every lad in this room who is studying art is simply

this—whatever you admire—be it a beetle or a beautiful woman—draw it. And if you draw a beautiful woman do not only see that the eyes are divinely placed in the head, that the nose is straight, that the mouth is regular, but try to see what there is in the expression of the face—which points to the beauty of the soul within. For we must all remember that there is not an action of our lives which does not leave a mark in some measure upon our physiognomy. It is not my business to moralise, but I may make this digression to say that if there is a thing that ought to prompt us to live beautiful lives it is that not only our souls suffer, but our bodies also from immoral lives. Now I have been looking around this room with a considerable amount of care. I have seen a great deal of good work, a great deal of painstaking, admirable work, and I think that on the whole the direction is good. It has often been my privilege to be permitted to make an address of this kind, and I have seen many collections of this sort. I am not a man who goes about flattering. I do think that this is a very remarkable collection of the results of youthful efforts—I am not going to say of great works of art, for they are not. But they show painstaking care, and in many cases very considerable artistic perception. There is a set of drawings, all evidently done from life, where a countryman is holding a scythe. Well, if I had been posing that model I should have endeavoured to make that man take the position absolutely of mowing. I should have said to my pupils, "Make a sketch, remember the motive; you want to draw, and draw it as well as you can." What would you have found in that case? You would have found that there had been generally taken a different view of the same action. The master would have been led to see the idiosyncrasy of each mind; he would have been able to judge absolutely of the capacity of the student for reproducing action. It is a very easy thing to talk, but it is a very difficult thing to teach. I have had considerable experience in teaching and know the difficulty; I know how disappointing it is, I know how heartrending it is at times, and I must say I think that your master has a great deal to be congratulated upon. I must congratulate you upon having such an excellent master, because the drawings round this room are clearly and neatly done. You have a thorough and efficient master.

Now before I close my few remarks I should like to say a few words about my friend Mr. Morris. I do not know whether you have read his lecture on art; if not I would strongly advise you to provide yourselves with it. You will see that art, after all is said and done, is not only painting pictures, making figures and statues, but is something a great deal more than that. To make root in society it must be as much the object of the poor man to have beauty around him as the rich man. It is possible for the very poorest of us to surround himself more or less with what is beautiful. There is no longer any excuse for bad taste; there is no longer any excuse for people being squalid and dirty. People can be refined and elegant if they only are simple. Upon the simplicity all great and beautiful art depends; upon the simplicity all great and beautiful lives depend. It is not the grasping after a station to which you do not naturally belong that makes a gentleman; it is not the grasping after a fashion that you cannot afford to carry out to its best that makes you appear a rich man when you are not. If you cannot afford to buy a magnificently carved chair, like that of the chairman of this meeting, have a simple one with plain square legs, but have it made as strongly as possible—do not let it fall to pieces when a heavy man sits upon it. If you cannot afford to have a Persian carpet, have an oaken floor, and if not an oaken a deal floor, but let it be kept clean and looking bright and beautiful, giving pleasure to everyone coming into the house. I do not know whether you understand the direction of my marks, but I mean that taste is in a great measure almost associated with fitness, that it is not because you cannot afford to have most splendid things that you should not have beautiful things. There is no greater mistake than to imagine that a thing to be beautiful must be ornamental. Proportion has more to do with beauty than ornamentation. You may have a most ornate chair, and it may be hideous; you may have the simplest chair, and it may be beautiful by the simplicity of proportion. Do not imagine that because you cannot buy magnificent furniture your furniture must necessarily be ugly. There is one thing I should like to say before I stop. You know now that in these days there is no reason why we should read bad literature; there is no reason why every person around Wiltshire should not cultivate his mind by good literature. By cultivating one side of the mind you are cultivating the other sides of the mind, and are constantly raising your minds into loftier levels of thought. Not only are you raising it if you read good literature, and raising it also by looking at fine pictures, but you have all the advantages which it is impossible to say you could have had twenty years ago. Now I would advise you all to avoid as much as possible looking at bad art; avoid reading any book but the best. Only think what advantages you have now in England. You may have for a shilling one of the most beautiful works of art in the world; for a few shillings you may become the possessor of the noblest poetry—Shakespeare and Milton. Why, then, should not every Englishman be a cultivated person? I do not know, ladies and gentlemen, that I have anything more to say. I have kept you all too long. It has been my endeavour, in a few



remarks, to show that art is a very honourable thing indeed ; that in the exercise of it the finest part of man's mind is brought into action, and we seem all to appreciate it. Every one of us in this room may be a sharer of its beauty and its glory.

### THE CHANNEL TUNNEL.

A LECTURE was delivered in Glasgow on the 14th inst. by Professor Boyd Dawkins on "The Channel Tunnel and the Physical History of the Straits of Dover." The lecturer said there was a time when this country formed part of the Continent, from which it is divided by the "silver streak." The North Sea in the remote period referred to was occupied by a broad valley ; and the Straits of Dover, as we know them now, were represented by a long line of chalk downs, analogous in every part to those chalk downs which are seen in the neighbourhood of Dover. At that early time, when Britain formed part of the Continent of Europe, the country was covered by a great series of confluent glaciers, and man and the wild animals he hunted wandered into Scandinavia and North Germany, until they were brought within sight of the great icy regions of the Arctic. As the presently dividing area became submerged, the climate, formerly severe, became temperate. Such animals as the woolly elephant and the woolly rhinoceros did not survive the change, but the greater part of the wild animals which were living in the preceding period still exist. During the time this submergence was in progress geologists had obtained evidence that man made his first appearance here. He was known under the name of the Eocene hunter, and was interesting in every way, not simply because he was the first of the race who are now living in Europe, but simply and solely because he was the man who introduced domestic animals into the country, as well as the arts of spinning, weaving, and winding. Although the silver streak had begun to be developed at the close of the pliocene age, yet during the time the neolithic farmer and herdsmen were in this country the submergence had not yet been finished. During the last-mentioned period men were almost totally unacquainted with the use of metals and bronze using. People first made their appearance in this country at the close of the neolithic age. In these times the "silver streak" was no defence to the inhabitants of Britain, as successive invasions by Continental peoples plentifully showed. Whoever commanded the sea approach would always rule the island. It therefore seemed to the lecturer that the question of tunnel or no tunnel was practically a question of who shall be rulers of the sea, and so long as Britain was master of the sea, Mr. Dawkins did not think we need be very fearful about the tunnel being made. After refuting the objection urged against the tunnel being opened that it would destroy the national character, the lecturer proceeded to speak of the various schemes that had been suggested during this century to minimise the barrier to commerce through our being separated from Europe by the silver streak. The first proposal was of making two galleries beneath the sea, the upper one for horses to gallop over, and the other one for drainage. The time it was thought horses would take to pass over this gallery was one hour. The next scheme was devised by a Frenchman in 1834, who thought a tube put down at the bottom of the sea might be of use as a means of communication. An eminent citizen of Glasgow, Mr. James Young, took up that idea individually many years afterwards, in 1858. The original proposer of this means of communication gave up the notion, and in 1858 came to this country and had an interview with Prince Albert and Lord Palmerston with the view of getting Britain's co-operation with France in carrying out some useful plan. The Prince Consort was favourable to the establishment of such a connection with the Continent, but the Minister opposed it, and addressed the stinging remark to Prince Albert, "You would think quite differently if you had been born in this country." The Queen was pleased with the project, and wrote to Lord Palmerston—"You may tell the French engineer that if he can accomplish it I will give him my blessing in my own name and in the name of all the ladies in England." In 1868, it was interesting to note, a petition was presented to Napoleon III. from a number of distinguished English people asking his Majesty's support for the construction of a submarine tunnel, intended to connect the railways of England with those on the Continent. Curiously enough the very first name appended to that petition was now in the same position in the list of petitioners against the tunnel in 1882. In 1870 the French Government applied to the English for their views, and what support they would give to the project, but negotiations were broken off at the time of the Franco-Prussian war. In 1872 the British Government, through Lord Derby, replied that they would offer no opposition to the scheme provided they were not asked for any loan or grant in connection therewith. On the strength of this argument the French Government granted authority to a company in 1875 to set about the tunnelling of the Channel bottom. While no formal treaty was ratified, yet there could be no doubt that Britain at that time entered into an international agreement, which was practically of the same value. In the same year an English company was formed, and a Bill passed to enable them to carry on certain under-

takings, the notion then in vogue being that the English and French were to work the excavations into the centre of the Channel, where they would meet and establish the passage. Nothing, however, was done at this side until in 1881 Sir Edward Watkin and the South-Eastern Railway Company obtained a Bill from Parliament allowing them to undertake some preliminary experiments in boring to be carried on. As a result of these investigations, it has been found that the geological part of the problem of tunnelling the Channel can be satisfactorily solved. On both the French and English cliffs they had most conclusive evidence that the chalk was of exactly the same character, and from the wonderfully accurate observations of the rocks at the bottom of the sea there could be no doubt that the chalk was perfectly continuous from side to side. The main difficulty in making the tunnel would be in working in rock which was not watertight. Of the cliffs, the upper portion is composed of rock not watertight, and the lower on grey rock is watertight. Consequently the scheme which begins its working in dry rock, and runs through dry stone the whole way across, is, so far as Mr. Dawkins knew the geological aspect of the question, the only one which could be satisfactorily carried out. There was no reason to anticipate faults or fissures in the rock through which water would get into the tunnel. In the 2,000 yards already pierced the tunnel was so dry that it did not require any pumping at all. Nor was there any need for special ventilation, for while the boring machine, worked by compressed air, was in motion, the air given off was perfectly sufficient for ventilation. Mr. Dawkins described the machine used for cutting the rock. It makes between two and three revolutions a minute, and at each turn cuts 8-16th of an inch from the rock. The rate at which that machine worked is something like 18 yards a day, and there was every reason to suppose that a stronger machine will be able to work at the rate of something like 30 yards a day. The French, working at the rate of 18 yards a day, had cut 600 inwards. The probable cost of the undertaking the lecturer estimated at 6,000,000*l.*, which would be borne by the South-Eastern Railway Company, the London, Chatham, and Dover line, and the French railway companies. He felt perfectly certain that Englishmen would benefit greatly by the formation of the tunnel, among other good results being the removal of the insularity of our national character. He would not say that the making of a channel tunnel would be taken up in earnest just immediately, but he felt certain that if we did not do it now we should do it later. It was entirely a matter of time.

### TRUE AND FALSE ÆSTHETICISM.

THE annual meeting of the Glasgow School of Art was held on Monday. Among the speakers was Professor Jebb, who said he should like to say a few words about the æsthetic movement. In the first place, he should speak of the word "æsthetic." Parody could sometimes destroy permanently one's pleasure in a poem. It was the equally unfortunate privilege of cant to destroy or debase the meaning of a word, and he feared that the æsthetic movement had permanently destroyed the originally noble and significant word, which meant what one perceived oneself, not what other people perceived. Now, the mistake of the æsthetic movement could be very simply defined. It consisted in leaving nature. No art could have a real life unless that life was of the age to which the art belonged. They might make art live by the imitation of dead externals, whether they belonged to the Middle Age or to ancient Greece. Æstheticism had been an evil in so far as it was the senseless and extravagant imitation of externals without any perception of the relation which ought to exist between such exterior things and the life of the age in which they were being reproduced. He should like to say that he absolved Mr. Ruskin of any fault in relation to the æsthetic movement, for Mr. Ruskin had always taught that the best art must be honest and sincere, and must, if it was to be really good, spring from an earnest and noble moral motive. He did not say that Mr. Ruskin had not sometimes pushed that doctrine to an extreme. Still, apart from such excesses, he desired to give Mr. Ruskin, as all did, entire credit for the noble way in which he had asserted the truths, the necessary truths, of the sincerity and earnestness of the higher art. It was not Mr. Ruskin who had taught people to believe that orthodoxy of art depended on the personal manifestations of sunflowers or knee-breeches. The æsthetic movement was over, and he (Professor Jebb) thought it was well over, as measles were well over. It was a malady that was certain to come—or something like it—in such a movement towards art as had been going on in this country. It was a disease that was past, and it was well past. It had not been taken too seriously, and now that it was over—thanks partly to the genial correctives administered by *Punch*—let them remember that it had done some good. It cast ridicule on the noble things which it burlesqued ; it also did something to kill the ugliness against which it protested, and he should say that when the epitaph of the æsthetic movement was written it ought to be remembered that, with all its absurdities, æstheticism protested against some very ugly and absurd things, and that it had done something towards killing them.



## NOTES AND COMMENTS.

M. NENOT should be a gratified and happy man, for it is given to but few in the ranks of the architectural profession to gain such distinction at the outset of their career (M. NENOT is barely thirty years of age) as has fallen to his lot. It will be remembered that a few months ago he carried off, against numerous competitors, the first prize of 2,000*l.* in the international competition held at Rome for plans for the erection of a monument to the late King VICTOR EMMANUEL.

He has now been again successful in the competition for the reconstruction and extension of the Sorbonne, in which about thirty other architects took part. The jury consisted of twelve members appointed by the Government and six others elected by the competitors themselves. For the first prize, at the first ballot out of seventeen votes recorded NENOT received six, BALLU four, LARCHÉ four, FORMIGÉ two, MARIAND one; and no one having the absolute majority a second vote became necessary; and on this occasion M. NENOT was awarded the prize by no less than eleven out of seventeen votes. The other nine competitors, who by the conditions of the contest are entitled to prizes, were placed in order of merit as follows:—MM. LARCHÉ, BALLU, FORMIGÉ, GALERON and VAUDROYER, MARIAND, COISEL, BREASSON and CAMUT, L'HEUREUX and HERMANT père et fils. It became the duty, therefore, of M. ALPHAND to announce to the Council Municipal that the place of honour had been awarded to M. NENOT, who is to be charged with the carrying out of his plans. This remarkable young artist is a native of Paris and a Prix de Rome, in which city he finished his studies at the Medicis College. In 1871 he received the military medal for distinguished bravery on the sanguinary field of Bourget.

A COMMITTEE has been formed in Manchester to purchase the remaining sketches of the late JOHN LEECH. There are about 200 subjects, comprising political cartoons, illustrations to *Bentley's Magazine*, *Punch*, DICKENS's works, and sporting sketches. The sum required is, for 150 drawings, 1,000*l.*; for the 200, being the whole remaining works, 1,250*l.*, and the subscriptions already amount to about 400*l.* The project has been supported by Sir F. LEIGHTON and several of the Royal Academicians. Mr. MILLAIS, in writing to the Committee, said: "Very few of *we* painters will leave such good and valuable work as he has left—work which in great part is historical." According to Mr. BOEHM, one of the greatest artists was JOHN LEECH. Mr. BENTLEY, the publisher, in his letter says: "Where shall we find any other artist illustrating society with the grace and refinement he did, with the airy, delicate humour, with the manly sense, with the perfect purity which marked everything which proceeded from his pencil?" It would be difficult for any committee to purchase works that would be more popular than JOHN LEECH's. His sketches in South Kensington are always an attraction.

THE subject of competition fixed upon by the Académie des Beaux-Arts for the Achille Leclère Prize is "a hall suitable for meetings and distributions of prizes in a large public school or collegé." The plans must provide for the comfortable seating of 3,000 persons in an amphitheatre surrounded by galleries, and in connection therewith must be a reception room capable of containing 200. The site allowed is not to exceed 70 mètres in width, but the depth is not fixed. The number of competitors is expected to be very large.

THE inauguration of the first Exhibition of the International Society of Painters and Sculptors took place on Tuesday last, the 19th inst., at the Georges Petit Gallery, in the Rue de Sèze, Paris, and attracted a large attendance on the whole. The works of MM. DAGNAN, CAZINET, and BASTIEN-LEPAGE appeared to carry off the principal honours, although those of MM. DUEZ, EDELFFELDT, SARGENT, LIEBERMANN, and W. STOTT were also freely commended.

THE Société Centrale des Architectes last week elected its officers for the coming year, the following being appointed:—M. QUESTEL (member of the Institute), president; A. NORMAND and DE JOLY, vice-presidents; LUCIEN ÉTIENNE, principal secretary; PAUL WALLON, assistant-secretary; MOUNIER, press-secretary; RAULIN, librarian; FEYDEAU, treasurer; BAILLY (member of the Institute), ROLLAND, and UCHARD, auditors.

THE Commission appointed to examine the project for the erection of a Crystal Palace in the Park of St. Cloud has reported in favour of its adoption by a considerable majority. The next step is to obtain the authorisation of the Chambers, which is not likely to be refused after this favourable report.

It is announced that the Munich Artists' Association will hold in 1883 a great International Exhibition in the Royal Crystal Palace at Munich, from July 1 to October 15. The King of Bavaria has accepted the patronage of the Exhibition, the royal Government delegates a representative to the Committee, and will promote the undertaking in all respects, giving gold medals to be distributed by an International Jury. Every State or every group of States, acting in unison, may form an independent collective exhibition. In conformity with this rule Germany will arrange a Collective Exhibition of works of German artists, with a committee of selection, composed of members of the Artists' Associations of all the principal art-centres in Germany. Another noteworthy feature is, that the different States may be represented by delegates in the Central Committee. It is supposed that the chances of selling works of art will be favourable. A lottery will ensure the sale of a considerable number of works, and at the last International Art Exhibition in 1879 the purchases amounted to about half a million mark. The Honorary President of the Central Committee is CARL VON PILOTY, Director of the Royal Academy of Fine Arts, and the Secretaries are M. HERMANN ARNOLD and M. EDUARD HEINEL. Among the members of the Committee are many eminent artists.

ACCORDING to the *Augsbourg Gazette*, the remains of a Roman city have just been discovered in Bavaria, near the famous line of earthworks raised by the Romans between Ratisbon and Cologne to withstand the incursions of the German tribes. Near this city, which has been identified with the Abusina of Pentinger, has also been found a Roman fortress, larger in extent than even the Taunus Castrum, which for long past has been a favourite place of pilgrimage for archaeologists.

VICTOR-FLORENCE POLLET, the celebrated French engraver and water-colour painter, died last week at Mayenne, where he had been staying during several months for the benefit of his health. He was born in Paris in 1811, studied, first, under INGRES and PAUL DELAROCHE, and then, after entering the studio of RICHAUME, carried off, in 1838, the Prix de Rome for engraving. His best-known works are—*The Violin-player*, executed at Rome after RAPHAEL; *Joan of Arc*, after INGRES; *The Well of Salome*, after BEDA; and as water-colours—*Idleness* and *Lydia*, now in the possession of the Baroness de ROTHSCHILD; *The Bath*, *The Siesta*, *Songes d'une fille d'Eve*, &c. POLLET was a Knight of the Legion of Honour, and member of the Amsterdam Academy.

THE Committee of the Society for the Protection of Ancient Buildings suggest that every owner of a valuable old house should have all the flues carefully examined by some competent surveyor, and all cracked hearths taken up to see whether any joists pass immediately under them. In no case should the fire be raked out of the grate on to the hearth, as is often done with the mistaken notion of greater safety. Grates are constructed to hold lighted fuel, and hearths are not. Again, much harm is done to old houses and their contents by the habit of shutting them up from light and air, with closed windows and shutters, and not keeping up steady fires when the owners are away. Damp and want of air are enemies to all old pictures and woodwork, and, moreover, on the return of the owner roaring fires are hastily lighted to warm the damp, chilled rooms, causing a quite needless risk. Lastly, the Committee wish to warn every fortunate possessor of one of these grand old houses of the serious damage done to all panelling, stucco, and metal-work, as well as to pictures, books, and furniture, by the use of gas with its acid fumes.

FRENCH art has experienced a further and serious loss in M. POIRSON, a young painter of the greatest promise, who was carried off last week by inflammation of the lungs at the early age of thirty-three. Among his best-known works are—*The Absolution*, *The Old Captain*, and *The Pensioners*. He issued from CABANEL's studio, and secured a medal at the last Salon.









TREWERN HALL, MONTGOMERYSHIRE.

DRAWN BY THOMAS E. PRYCE.

W. H. P.  
1882  
Sprague & Co. Photo-litho. London









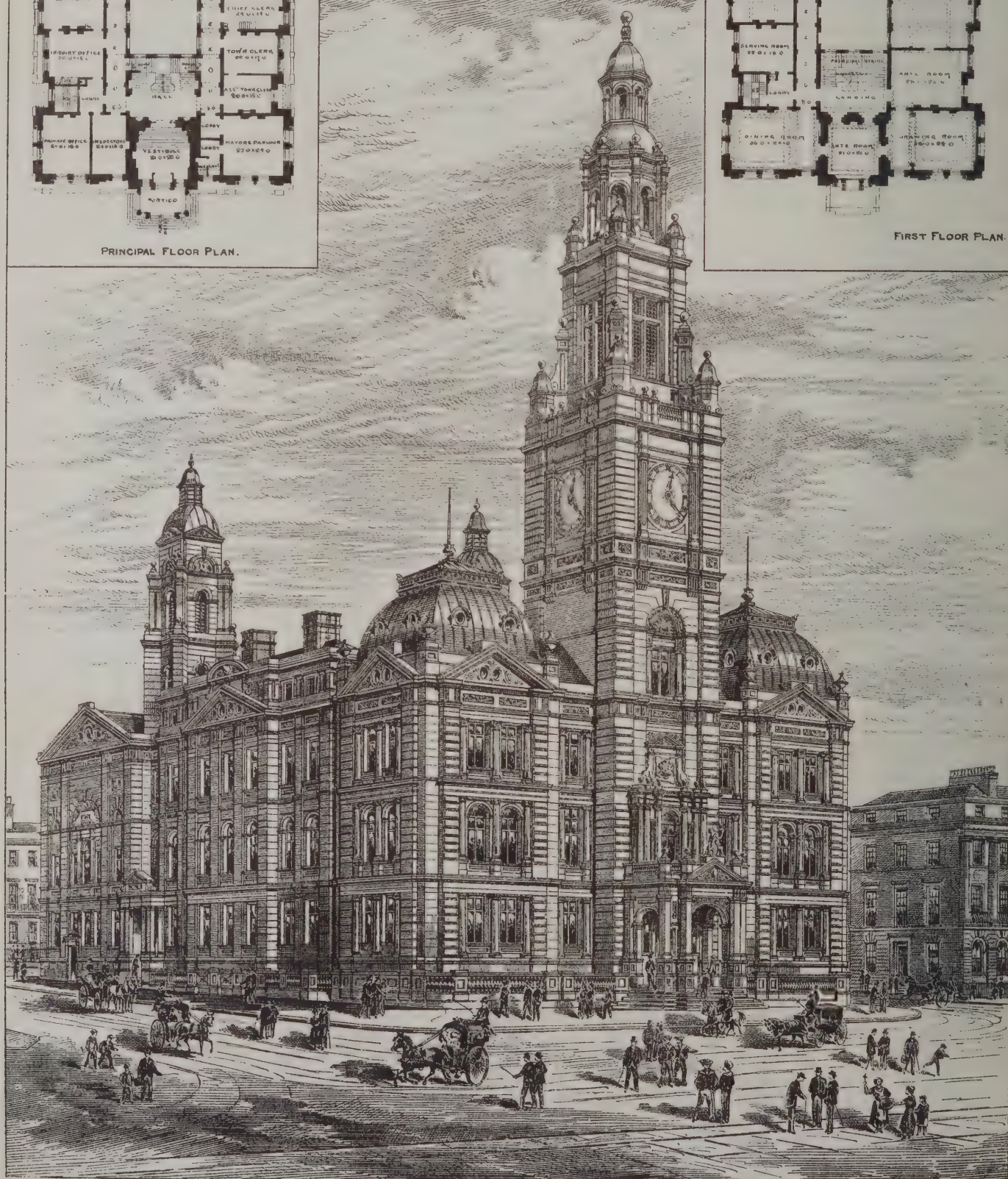
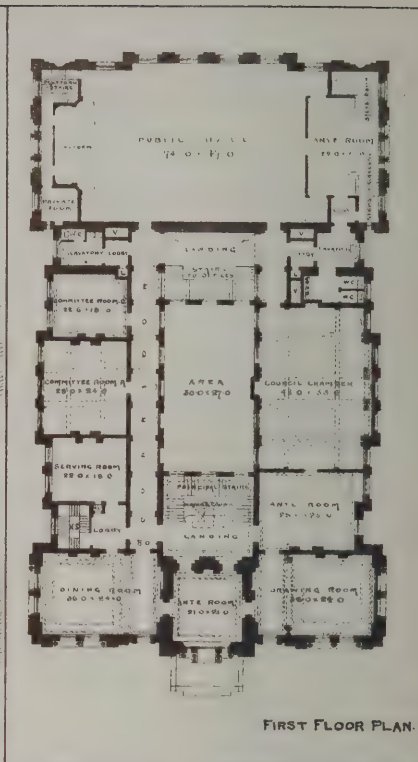
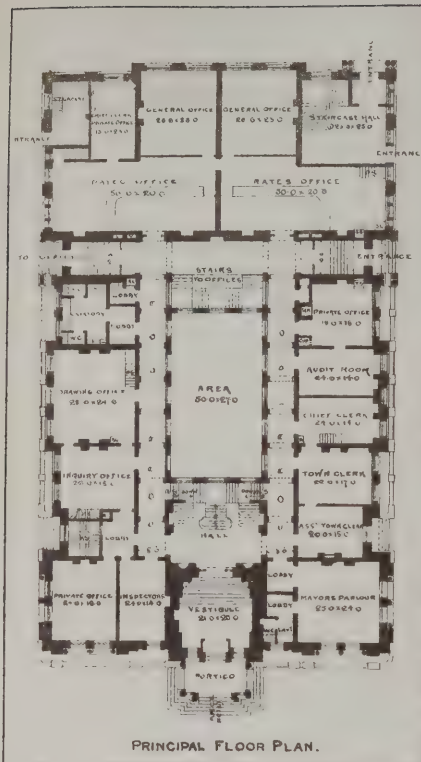
DESIGN FOR MUNICIPAL BUILDINGS, GLASGOW.

BY R. P. PULLAN, F.R.I.B.A.







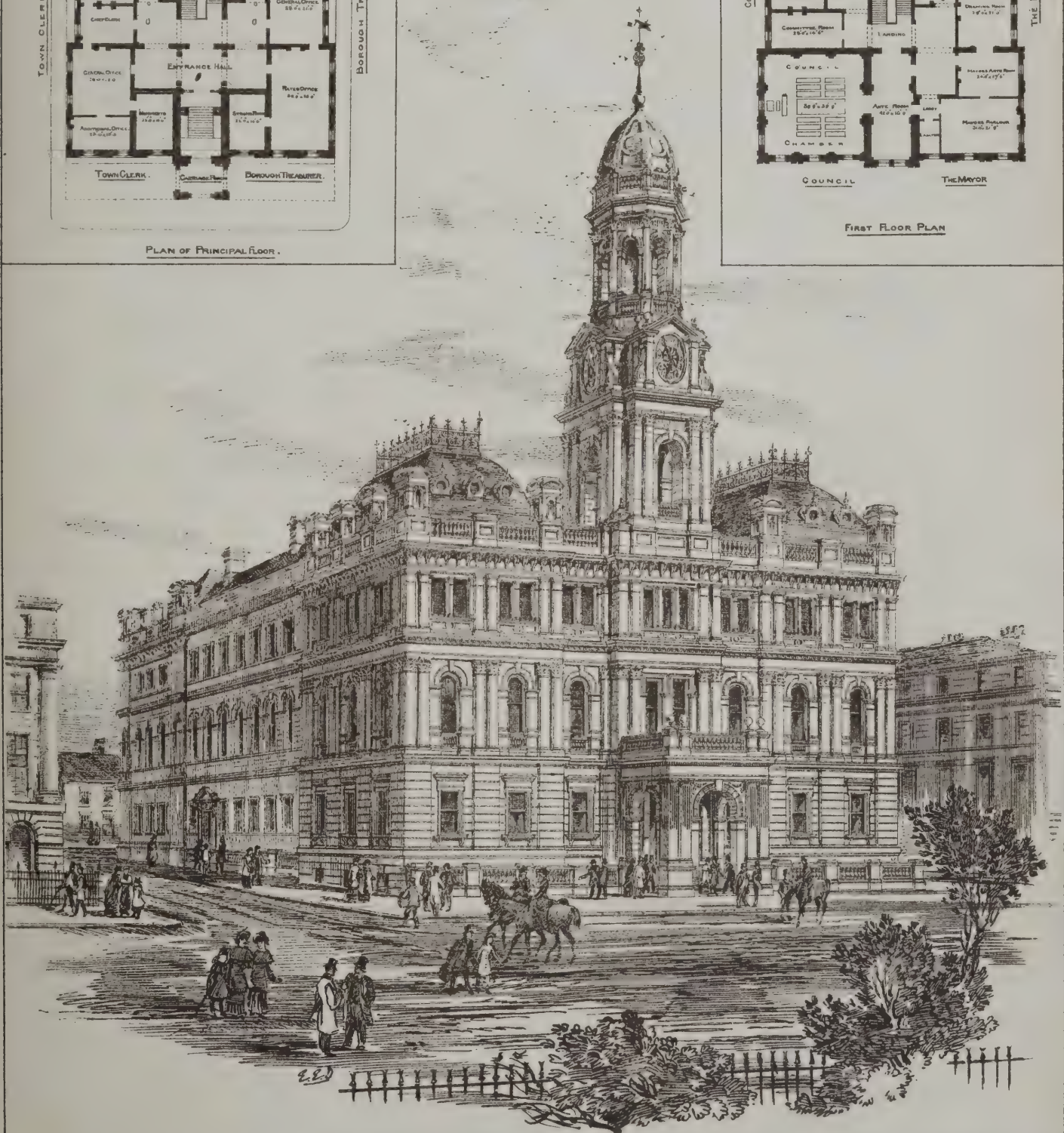
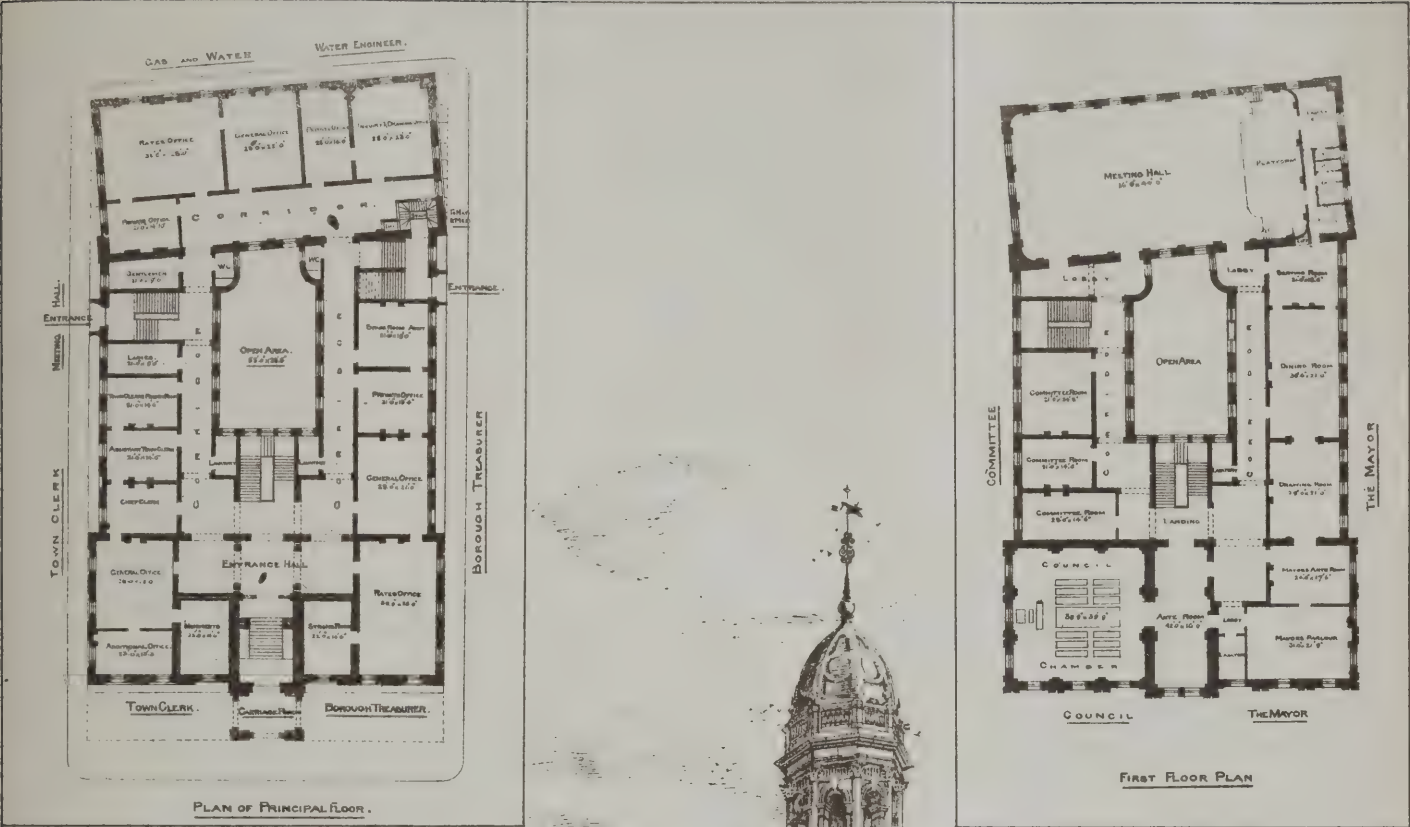


Spence & Co. 23 Martins Lane, Cannon St. E.C.

# DESIGN FOR THE BIRKENHEAD TOWN HALL.

BY MESS<sup>RS</sup> HOULT, CONNELL & WISE, ARCHITECTS.





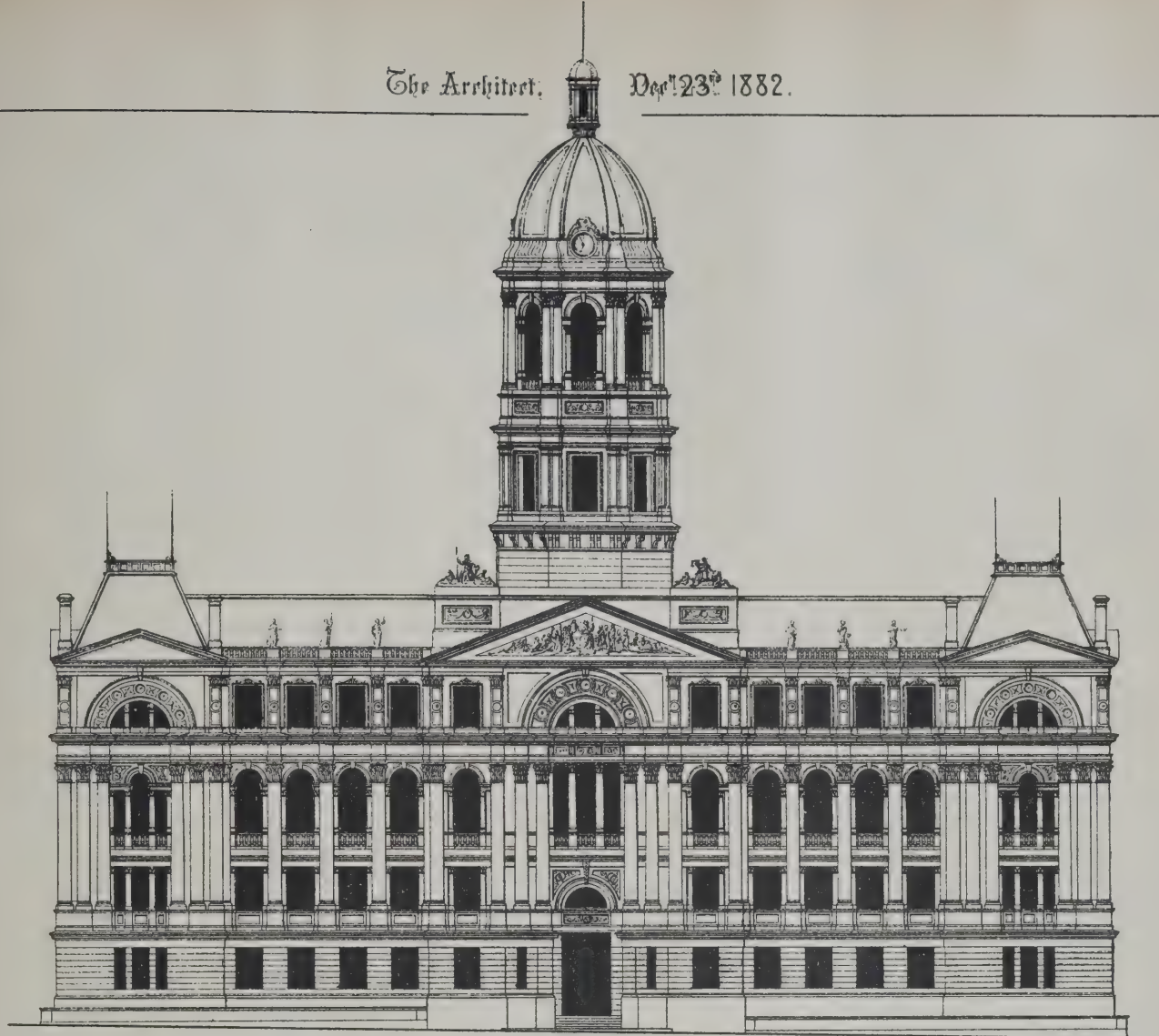
DESIGN FOR THE BIRKENHEAD TOWN HALL.

BY ALBERT VICARS & JOHN O'NEILL, ARCHITECTS.









ELEVATION TO GEORGE SQUARE

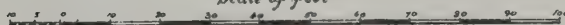
WEST



ELEVATION TO GEORGE STREET

EAST

Scale of feet



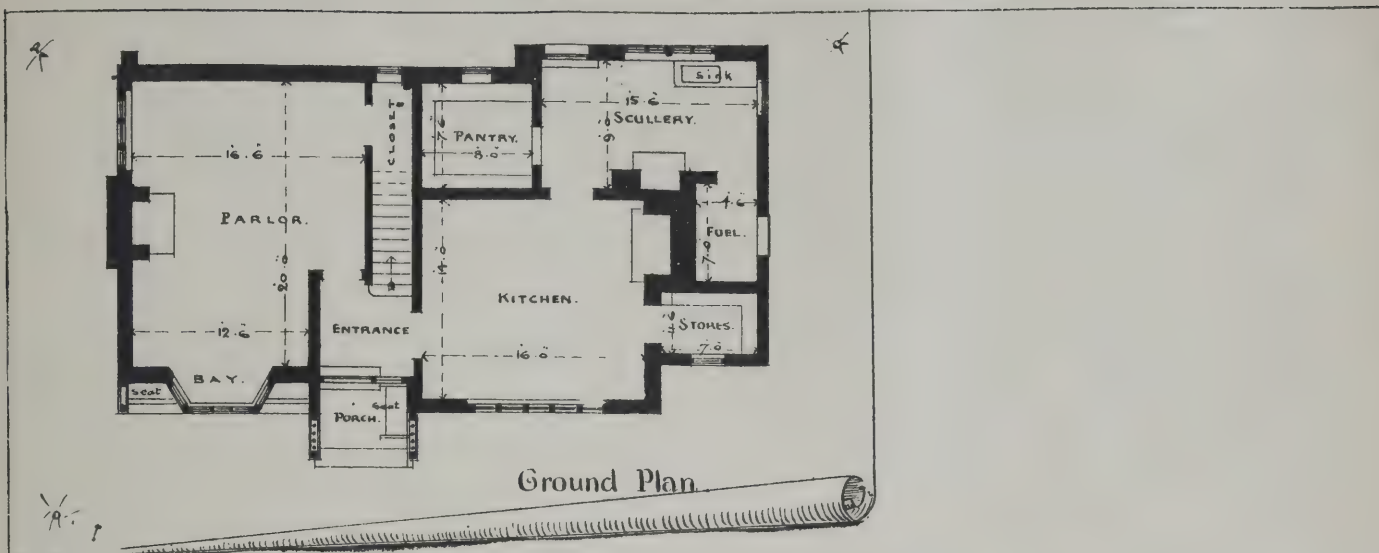
DESIGN FOR MUNICIPAL BUILDINGS, GLASGOW.

BY R.P. PULLAN, F.R.I.B.A.









W. A. C. 22, Martins Lane, Canova St. EC

# COTTAGE IN THE GROUNDS, BACHE HALL, CHESTER.

FOR R. S. HUDSON ESQ:  
E. A. OULD, ARCHT







## ILLUSTRATIONS.

## DESIGN FOR GLASGOW MUNICIPAL BUILDINGS.

THIS design was submitted in the late competition by Mr. R. P. PULLAN, F.R.I.B.A. The plan is based upon the diagram furnished to competitors. Certain modifications were made in the sizes and proportions of the rooms, but the general arrangement is that suggested by the Town Council. A flight of steps leads from George Square to a spacious and lofty vestibule, two storeys in height, over which is situated the council-chamber on the second floor. The vestibule leads into an octagonal hall, whence branch off the main staircases. The corridors throughout are wide and well lighted.

A certain dignity of effect is the result of sound classical proportion and symmetrical arrangement of the elevations. In order to attain this the Palladian style has been adopted. On a comparatively plain rusticated basement stand ranges of Corinthian columns and pilasters, occupying two storeys in height, and running all round the building. This would tend to give a palatial character to the edifice, from whatever point of view it was seen. A bold attic storey with panelled pilasters between the windows, and surmounted by an open balustrade, crowns the whole composition. A lofty octagonal tower, finishing in a dome, rises from above the octagonal hall in the centre of the elevation towards George Square.

## DESIGN FOR THE BIRKENHEAD TOWN HALL.

WE publish this week the design for the above, which was prepared by Messrs. A. VICARS & JOHN O'NEILL, architects, of Somerset Chambers, Strand, W.C.

The style of architecture adopted is a free treatment of Italian Renaissance, designed to harmonise with the surrounding buildings.

The materials proposed to be used were bricks, faced externally with Storton stone, on the four fronts; the open area to be lined with white glazed bricks, for the more efficient lighting of the corridors and staircases. The muniment-rooms, strong-rooms, corridors, landings, and entrances would be of fireproof construction, vaulted with Portland cement concrete and wrought-iron girders. The muniment-rooms in basement for public records would be accessible from the fireproof corridor and staircase. The doors and window-shutters to muniment and strong rooms would be of iron. The timber would be best Memel or red pine; the roofs covered with slates and lead. To insure dryness, the entire area under building would have a bed of concrete.

The buildings are arranged round the four sides of the site, leaving for light and ventilation a central open area. All the rooms look towards the streets. Three entrances are provided to give access to the several departments; and there is a private staircase from the mayor's kitchen in basement to the serving-room on first floor. The mayor's apartments, council-chamber, and committee-rooms are placed on the first floor, approached from the principal staircase. The mayor's apartments and council chamber communicate, and form a handsome suite of apartments. The offices for the town clerk, borough treasurer, the gas and water, and the water engineer's offices, being the departments to which the public will require most frequent access, are placed on the principal floor. As the second floor has the best light for a drawing office it is partly apportioned to the borough surveyor. A heating chamber and coal store is provided in basement. In the roof there are two large rooms, each about 40 feet square, available for storage; there is also a spare room, 21 feet by 9 feet, on second floor, and a room in basement, 16 feet square, for gas-meter and stop-valves for water service.

A large hall, with platform, retiring-rooms, and gallery, is provided, suitable for entertainments and public meetings. It is accessible from two of the principal staircases, and a private staircase from Brandon Street to the platform and retiring-rooms. There is a private entrance from the mayor's apartments to the platform.

It was proposed to heat with hot water the municipal rooms on first floor and the whole of the corridors. The ventilation would be effected by air-shafts carried up in the walls for the outlet; the inlets for the supply of fresh warmed air to the rooms to be in connection with ventilating grates in the fire-places.

The area of the departments is 31,807 superficial feet, exclusive of entrances, staircases, landings, lavatories, and the

corridors, which have a minimum width of 9 feet, and ample provision for lighting. As to the cost, the building was designed not to exceed the sum of 42,000*l.* mentioned in the instructions.

## DESIGN FOR BIRKENHEAD TOWN HALL.

THE second design which we publish is the joint production of Messrs. HOULT & WISE, of Liverpool, and Mr. F. J. CONNELL, of Birkenhead. In their report which accompanied the design they stated that the plans embraced the following, the full accommodation that was desired:—A hall for the public; separate entrances near the most frequented offices; separate entrances to the basement; all the rooms lighted from the streets; reception-rooms facing the square; the chief departments on the same floor; and the first floor reserved to the use of the mayor, the council, and the committees. Also that the areas of the rooms and the departments exceeded those desired, and spare rooms and vaults were provided in anticipation of the future requirements.

Their estimate of the cost was 42,000*l.* if carried out in a very plain manner, exclusive of elaborate finishings, fittings, decorations, clock, bells, &c.

## COTTAGE IN THE GROUNDS OF BACHE HALL, CHESTER.

THIS is a small house for a landscape gardener, situated in the picturesque grounds of Mr. R. S. HUDSON'S residence, near Chester. The walls below are of red Ruabon bricks, from Mr. J. C. EDWARDS' yard, and above they are either tiled with Staffordshire red tiles, or are of oak timber framing, with white cement panels. The roofs are covered with Shropshire strawberry tiles. This part of the grounds, called the Pinetum, contains a large and valuable collection of pines and firs, the dark foliage of which forms at all times of the year a becoming background to the cottage. The ground plan shows the arrangement below. Upstairs there are four good bedrooms. The contract was 700*l.*, and the contractors Messrs. REECE Bros., Tarporley. The architect was Mr. E. A. OULD, of 24 Newgate Street, Chester.

## TREWERN HALL, MONTGOMERYSHIRE.

THE view of this "Bit of Old Montgomeryshire" has been reproduced from a drawing by Mr. THOMAS E. PRYCE, A.R.I.B.A., which was exhibited this year at the Royal Academy. Trewern Hall is a type of house not at all uncommon in Montgomeryshire. Once the abode of a land-owning family, which either from poverty or other causes has become dispossessed of its estate, it now forms but a portion of a larger property, and is used and occupied as a farmhouse.

The plan is the ordinary one of the period, a large hall entered directly from the porch communicating with the other apartments on the ground floor, about 35 feet long by 18 feet or 20 feet wide (speaking from recollection only).

The date, 1610, with the initials "R. F.," is inscribed on the inner face of the doorway head to the porch. This part may be of a later date than that of the main part of the building, corresponding probably with the date of the erection of the gable to the right of the porch (which is of much rougher workmanship than the rest), and also probably with the date of the insertion of the low six-light bay window in the hall, which apartment was originally lighted by a range of small windows, continued round the flanks of the porch, which is now in a very mutilated condition, the sides being plastered and bricked up, and the front filled with modern lattice wood-work.

The corner posts average about 10 inches by 10 inches scantling with quarterings, showing about 7½ inches on face by 5½ inches thick, placed about 10 inches apart, the interspaces being filled with "wattle and dab," and lathed and plastered again on the inside. The house altogether is a very interesting specimen of the timber work with which this district abounds, but which, sad to say, is year by year becoming rarer, and suffering greatly where not actually pulled down from modern alterations and what is strangely termed "the civilising and improving spirit of the age."

T. E. P.

The Nassau Archæological Society has been conducting excavations at the old Roman fortress on the Saalburg, near Homburg. A set of Roman tiles, on which are inscribed tables of the wages paid to Greek labourers employed by the Roman builders, has been discovered.



## GLOUCESTER CATHEDRAL AND ITS ARTISTIC CHARACTERISTICS.\*

(Concluded from page 379.)

WE may easily imagine how imposing was the scene when that grand church was opened to the people. Good Abbot Serlo had won his way by the greatness of his character and his piety. "Ecclesiæ murus, virtutis gladius, buccina justiciæ," are the words written to his memory by William of Malmesbury. The wealth and work of that good man attracted other good men to him; and among them was one Peter, his prior, who succeeded him as abbot—a man of literary and artistic pursuits, who first began a library here, and collected rich mass-books and embroidery, and filled the treasury with valuable things, amongst which was the famous Gloucester candlestick, now in the safe custody of the South Kensington Museum, which, with all its grotesqueness of design and ornament, is no mere relic of antique curiosity, but a work of such excellence as, even in these fastidious days, to command our surprise and admiration. It must have been a heart-breaking scene for the good abbot and his art-loving prior to witness, only two years after their dedication festival, their glorious abbey church devastated by fire. The great roof and painted ceiling lay smouldering upon the floor. But as, thank God, in so many human affairs good comes out of evil, the terror and ruin of those recurrent flames, which scar the history of all such buildings, brought about the use of stone vaulting, which, both for skill and beauty, became the consummating glory of mediæval genius. After four destructive fires the first work of Gothic vaulting here, which the monks of the Abbey devised and worked at with their own hands, was, however, not an artistic success. They cut and maimed the features of the fine old Norman clerestory, and placed their thin weak work too low, destroying all the original grandeur of effect. If it were just at all to stigmatise the arts of Romanesque or Norman times as grotesque or rude, there was yet about them that breadth and vigour of purpose which are the best elements of grandeur. But here in this first pointed vaulting was a grievous and irreparable injury, destroying all sense of proportion throughout the whole building.

### *The Cathedral and the Fine Arts.*

If our subject here were either archaeology or history, such events as these old walls have witnessed, when the last Saxon Edward trod these aisles or met his Witan on this very spot; or when the Conqueror William came to Gloucester at Christmas time to hunt the neighbouring forests, or met his Parliament within these very walls; or when the child King Henry III. was crowned upon those very altar steps; or when in solemn stateliness the murdered Edward was laid beneath these stones—such events as these would afford the opportunities of most picturesque description; for by ancient chronicles, by illuminated manuscripts, and by inference from similar events well known elsewhere, we could paint those pictures to the life. But our attention here is limited to those arts of ancient days that we see illustrated around us. If then we cast the eyes of our imagination backwards to those wondrous times, marked as they are by the contrasts of intense refinement with intense barbarity, we shall find in the broken record of their arts, such as the great religious houses present either to our memory by their records, or by their relics to our eyes, such works of surpassing beauty, such evidences of exquisite piety, as are enough to cool our pride and engage our deepest sympathies. If we remember how those arts of the Middle Ages grew in beauty and strength, not by imitation or by rote, but from the womb of creative genius; if we reflect how deep are the sentiments, the sympathy, the aspiration they express, we trace through their means the broad action of that humanity which is indeed the beating of the human heart from generation to generation, forward to ourselves, whose sense responds to every syllable of their poetry, or backwards, far backwards, to the days when one who was a poet, a prophet, and a king poured out his heart in such words as these: "I have set my affection on the house of my God, I have prepared onyx stones, and stones to be set, glistening stones, and of divers colours, and all manner of precious stones and marble stones in abundance, and gold for the things of gold, and silver for things of silver"—or to one who followed in such work, and added to it blue and purple and crimson and fair linen—or to the ancient seer, whose inspired sense of the future glory of Christ's Church broke out in such rhapsody as this: "Oh, thou afflicted, I will lay thy stones with fair colours, and thy foundations with sapphires; I will make thy windows of agates, and thy gates of carbuncles, and all thy borders of pleasant stones." Among the relics of this once great Abbey of St. Peter's there are the evidences of such enterprise in art, such record of the devotion of men's lives, their thoughts, their piety, their skill, as are better felt than told. They are their own interpreters. But we might tell of such things as these—how that some forms of art seem to have sprung up first here at Gloucester, such as the fan-vaulting of the Cloisters; and the web of screens and tracery of a style before its time, that enrich St. Andrew's aisle; or of that

master genius of architecture, whose name is among the great unknown, fired by the success and beauty of that work of Abbot Wygmore, and impelled by an enthusiasm approaching recklessness, that broke through the eastern apse, changing its gloom into a flood of light; and paring down the venerable walls, covered them with a film of tracery, and then threw up a vault of network stone so playful, so light, as seemed to need nothing but the air to carry it. We might still further tell of the qualities of ancient glass, so refractive as to turn it all to jewellery; or of that masterpiece of refined colouring still traceable among the shreds of ruin on the reredos of the Lady Chapel; or, again, we might praise the successful audacity which poised the great tower in mid air, and crowned it with embroidery in stone; or we might instance the monument and statue of King Edward II., perhaps the finest mediæval work of marble in England; or the unique bracket monument in the choir; or the art of encaustic painted tiles, and the treasures of history and genealogy which their heraldry contains. But all these things are rather for the study of years than for this passing hour. Take, rather, one broad glance at this mighty fabric. Place yourself where you can command the view, or wander in the aisles and see that great work in the completion of its beauty, as it was on the morning of that day (all but three centuries and a half ago) when the Prior met the King's Commissioner and surrendered the abbey for its dissolution. How different from what we see it now, denuded of its colour, poor in sculpture, robbed of those important features which made its architectural effect harmonious and complete, and others added which are an injury and a hideous disgrace. Of what it was we know enough by history and by inference to build it up again; but words will not build, and description would fail to bring adequately before you the full effect of what the art and the devotion of centuries had accumulated within its walls. In front of you would rise the great central rood on its loft, approached by stairs in the aisle upon your left; and beneath it the two altars for the people's church, placed right and left against the stone screen which parted it from the choir, each altar with its background of sculptured niches and coloured statuary. If there is a feature more remarkable than others, even now, it is the multitude of stone screen work about the choir and its aisles and transepts; but in those days we know of at least two more, which must have had imposing effect, at the end of each aisle of the nave; but these and what not more are swept away. Within the choir (without a word of disparagement of the present work, but rather otherwise) who can doubt what the high altar and its re-table must have been, as the work of that unsurpassed genius who changed the grim old Saxon apse into a wonder of gracefulness and light? Then all round this choir, its aisles, and its chapels, now, alas, empty and disused, but then with their apses filled with sculpture and their walls covered with storied painting; and last, not least indeed, that incomparable Lady Chapel, now desolate, but then a wonder of coloured walls and windows, and such a reredos as neither our fancy nor our skill could replace, now a blackened wreck; but then a work of highest art, and of exquisite workmanship in sculpture and in colours, before which we can only stand admiring, grieved, and silent.

Turn, then, from these materials to the moral of their tale. The Church in those days had its enemies, some just and learned, some ignorant and unjust. Rightly or wrongly it is not our business here to discuss, the Faith of Christianity as it then presented itself, whether in the plain guise of its primitive truths, or modified in the passage of centuries by all that ignorance, superstition, or the poetry of romance had done to darken or adorn it, the people were content, and they received the recompense of their simple faith. It was to them the light and the solace of their lives in an age of hardship and rough company. How natural, then, their reverence and regard for all that these sacred walls contained, that brought to their faithful eyes the assurance of consolation and support. The altars were their sanctuaries of refuge. The quiet aisles, whose peace was only deepened by the echoes from the world without, were their resting-places. Architecture had embellished them, sculpture had enriched them, and painting, which was then the poor man's literature, had covered them with stories, suggesting thoughts of devotion and peace. But what are all these arts? Does any estimate of them that we can take exhaust their nature? Whence come they? For what do they exist, if it be not for their power of appeal from man to man? Of what good that lofty choir, if it be but to enclose a vague and useless space; of what good to raise above it that great tower, if it be but to pile up senseless stones; for what the bulk and body of the great minster itself, if it be but a mass of meaningless masonry? No; but as the spark is that lights the candle, so has the touch of fine art illuminated those stones. The hands of their builders are dead, but their art lives; and their heart, their mind, their devotion, their very lives, still animate those monuments.

So ends my story; and the moral of it all is this—The foundation of all fine-art lies in that *relationship* which exists between the things of material and the things of spirit; and the degree of its perception and the power of its use is the gauge of all art's genius. By force of that relationship fine art testifies to that Divine life which underlies the whole sphere of man's mortal state. She testifies to the utter inadequacy of all material things

\* A paper read by Mr. T. Gambier Parry at the meeting of the Gloucester Cathedral Society, and reported in the *Gloucester Chronicle*.



to measure the range, or to satisfy the aspirations, of that which is itself illimitable, the human soul. She is herself that soul's interpreter. Her greatest works are but symbols. She is conscious of her own feebleness, and of those impenetrable clouds which dim her mortal sight. But she is conscious also of that light which shines beyond those clouds, and by an impulse of desire and faith she stretches out her arms to the heavens, and, silent, she binds around her lovely brow this motto: "What is not seen is the Eternal!"

### MR. MUNDELLA ON APPLIED ART.

ON Monday evening, Mr. Mundella, M.P., Vice-President of the Council, presented the prizes to the successful students of the West London School of Art.

The annual report of the head-master, Mr. John S. Rawle, showed that 558 students had attended the school during the year, being one more than had attended the previous year. The day classes were attended by 160 students and the evening classes by 398. The school fees received amounted to 868*l.*, while the Government payments for results were 435*l.*, being the largest amount earned by any art school.

Mr. Mundella, in addressing those present, said that he had been induced to accept the very cordial invitation of the chairman, Mr. Thrup, to be present on that occasion, because he had been informed by the Art Director of South Kensington that this was a school of great promise, and was one of the best in the metropolis, and ought to do excellent work in the future. It had also been stated that the school contained great art elements, which were especially deserving of encouragement and support. The institution was composed in a very large measure of two classes—namely, the employers of art workers and the persons who were engaged in industrial, decorative, and ornamental art work. It was by the aid of such a school as this that the lace manufacturers of Nottingham were able to hold their own aggressively against the lace manufacturers of all the world. It was with the object of encouraging applied art that the Government founded and subsidised art schools. The first Government grant that had ever been made for the purposes of art training was made in 1836, when a sum of 1,500*l.* was granted to the Board of Trade, who administered the gradually increasing annual grant from that date down to 1854, when the duty was transferred to the Science and Art Department. It should be clearly understood, however, that the object of the Government in making these grants was not to increase the number of pictures which were annually rejected by the Royal Academy, but to give technical art training to those who were practically engaged in the industries and manufactures of the country. Speaking on that occasion as Vice-President of the Council, he was only expressing the opinion he, himself an employer of art labour, had long since formed when he stated that South Kensington had been eminently successful in accomplishing the object for which it had been established. He had already shown that the first grants in aid of technical art training had been very small at the commencement. But in 1851 the first Great Exhibition was held. Perhaps but few present could remember that Exhibition, but he remembered it well, because he had not only been an exhibitor in it, but he had been a commissioner for his own locality. He had, moreover, a very lively recollection of the character of British art which was shown at that Exhibition. It had appeared to him in 1851, and he held the same opinion still, that if all the British art work of the first half of the present century, with its wall papers, its decorations, its hangings, and its heavy furniture, had been collected in one vast pile and burnt up, the world would not have been any the worse for it. Of one thing he was quite satisfied, and that was that whatever fashionable craze might prevail in the future, no one would ever dream of making a collection of the furniture and other works of decorative art of the first half of this century. We might well look with pride upon the productions of the days of Queen Anne, which had been designed by men who, although they made furniture, were great artists, of the days when Flaxman designed for Wedgwood, and when the architect left the impress of his genius, not only on the structure of the house, but upon its very door knocker. It was impossible to compare those beautiful works of art with the clumsy productions of later times without astonishment that the taste of this country could have so immensely degenerated. Our deficiencies in this respect were, as he had already stated, made clearly apparent in the Exhibition of 1851. In matters of this kind it was as well to be perfectly frank and open in giving credit to those to whom we were indebted for restoring a healthy tone to the national taste, and, in his opinion, the country owed a great debt of gratitude to the late Prince Consort for the stimulus he had given to our art industries, our art manufactures, and our art teaching. What had happened to our art schools since 1851? Undoubtedly they had been largely subsidised by Government, but they had also received considerable support from those who, like the committee of that school, had put their hands deeply into their own pockets in order to promote their success. It must be remembered that these schools had had in the first place to educate the customer, then the teacher, and then the workman. He recollected the time when, in Nottingham, no manufacturer would have dreamt of employing an English designer,

and it really seemed as though it was believed that English art had entirely died out, and that, whenever an art workman was required, they must go abroad, and notably to Paris, to fetch him. Now, happily, those times had passed away altogether, and it was known that Englishmen possessed more originality and more true artistic feeling than was possessed by Frenchmen. Frenchmen had a great advantage over us in this respect—that they lived in an atmosphere of art, and that they had their regular art classes, but every successive Exhibition showed that in the matter of art England had gained enormously upon Continental nations. Thus in the Exhibition of 1878 Frenchmen stood aghast at the sight of the productions of our art manufacturers, which showed them how greatly they had fallen behind in the race. Where now was to be seen our heavy and inelegant mahogany furniture; our carpets, with their lions and tigers and impossible animals; our hideous wall-papers, with their baskets of fruit and gaudy colours? These atrocious productions had all disappeared, he hoped never again to return, and their place had been taken by works of art of the graceful design and exquisite workmanship which now gave us so much pleasure and enjoyment as we saw them in our shop windows in walking along the streets of London. While, however, we had undoubtedly achieved a great success in the cultivation of a taste for applied art, we could not afford by any means to rest content with our present advance. It was true that this development of artistic taste had enormously increased the demand for our art products throughout the world, and had given a great stimulus to our export trade; but we must not forget that we were about to be exposed to a very severe competition. Let them see for a moment how this great advance—of which we had a right to be proud—had been brought about. The amounts spent by South Kensington since the Science and Art Department had taken up this branch of instruction were—in 1862, 12,000*l.*; in 1871, 30,000*l.*; in 1877, 62,000*l.*; and in 1881, 70,000*l.*; thus showing a very large annual increase in the sums expended upon art teaching. The number of persons receiving art instruction in elementary schools was—in 1857, 30,000; in 1862, 71,000; in 1871, 166,000; in 1877, 541,000; and last year 850,000. The art classes had gone on increasing from 3,000 in 1857 to 23,000 in 1881. The provincial and national schools of art numbered in 1852, 11,000; in 1863, 13,000; in 1871, 21,000; in 1877, 29,000; and in 1881, 32,000. These figures showed that we were making a very steady progress in art teaching, not only in the metropolis, but throughout the country. The total numbers who had received art teaching in institutions aided by the State had been, in 1857, 43,000; in 1862, 87,000; in 1871, 212,000; in 1877, 610,000; and in 1881, 917,000. Therefore we were doing something considerable, after all, in the way of art teaching in this country. South Kensington, however, was by no means satisfied with what had been done, either as to the numbers taught or as to the method of teaching pursued, and it was already intended to take a new departure and to effect great improvements in the existing system of art training. As he stood at the table he was surrounded by the prizes which he had been called upon to distribute to the successful competitors. The time, however, had now passed when in his opinion it was necessary to bribe students into taking an interest in their work by giving them prizes, and he thought that it would be well to spend the 10,000*l.* given annually in prizes in giving the students greater facilities for pursuing their studies and in founding free scholarships and travelling studentships. Seeing that the soldier died willingly for the sake of a little iron cross, it was not too much to expect that artists would consent in the future to give up those prizes, worth perhaps a few pounds, and accept in their place certificates of merit which would mark far more clearly the progress which they had made, provided that they were afforded additional facilities for study. This was one of the subjects that was occupying his attention at the present moment. The reason that the authorities at South Kensington were not content with the progress that had been made was this—that, as he had said before, we were threatened with a competition in the future which it was impossible to disregard, and the danger of which could not be exaggerated. He had recently been in France for the purpose of inquiry into the new system of education which came into operation in that country on October 1 of this year, and while there he spent some time in endeavouring to ascertain what progress the French were making in giving instruction in art. He must say that he was perfectly astounded by the facts that had come to his knowledge on the subject. He had seen in Paris placards 6 feet long offering gratuitous instruction in art to every person employed in certain trades who would come and accept it. He found schools of art which were attended by hundreds and thousands of students established in every part of the country. These schools were supported, not only by the Government aid, but by the different municipalities out of the local rates and taxes. Thus, all the artisans of Paris and a large number of those in the country were receiving gratuitous art instruction. The municipality of Paris expended 32,000*l.* in this way last year, and that sum will be largely exceeded during the present year. He had brought home with him the Paris Budget for education for next year, and he found from it that that city, with its population of 1,900,000, would spend on education double the amount that was expended for the education of the four



millions of people who lived in London. In saying this he was telling them a fact which the people of England ought to be made acquainted with, because before long they would have to meet with its consequences. Last year a commission had been appointed to inquire into technical education throughout Europe, and when the commissioners came home they would pour into his ears the different facts in relation to the subject which they had collected. They had already informed him that they had been astonished at the lavish expenditure which was now being incurred by all continental nations for the purposes of education, they having been stirred up to do so very largely by the example of this country and by rivalry with others. At Rouen artisans might be seen in large numbers working at their studies at night, with their coats off for two hours on five or six nights in the week, diligently improving their minds and acquiring skill at the conclusion of a hard day's work. At Liège, in Belgium, with its population of 100,000, 6,000 young men were at work in the Art and Science Schools every night. Only recently in Paris 300 artisans engaged in a competition in modelling, and were at work from nine in the morning until five in the evening. In these circumstances, we ought to fear lest by our own negligence and lack of enterprise we fall back in our industrial career, and nothing would do so much to keep our industries and manufactures to the front as art teaching. There was another point to which he desired to refer before he sat down, and that was with regard to the feeling that was too apt to be entertained in this country that decorative and applied art was degrading to an artist. He trusted that before long we should entirely get rid of that false notion. He had the high authority of Mr. Ruskin for saying that there could be nothing degrading in producing a work of art, even though it took the form of a piece of furniture. It must not be forgotten that the Italian artists of the Renaissance began their careers in the workshop, and that it was only by degrees that they developed into the skilful men they became. So much for the work which art training produced; but they must not lose sight of the enormous advantage it was to the worker himself. Possessed with a knowledge of art, he felt his work cease to be a mere dull, mechanical drudgery, and his labour in producing that of which his mind could appreciate the beauty became a pleasure instead of a toil. In conclusion, he must express the pleasure with which he looked upon the works of art around him, and the hope he had that the school would have a great future before it. The right hon. gentleman then proceeded to distribute the prizes, and the proceedings terminated.

#### RAPHAEL'S SYSTEM.

THE catalogue of Mr. Malcom's drawings by the Italian masters which are about to be exhibited in Glasgow contains the following reference to the system of building up forms from the skeleton:—

"Two drawings for the well-known composition of the entombment of our Saviour—a panel picture now in the Borghese gallery in Rome. These very celebrated drawings, separate studies for the same group, illustrate each other, and it is not a little remarkable that from Raphael's time to the present they seem never to have been separated. They should therefore now be described together. They are both pen drawings in bistre. Obviously they were executed at about the same time, but which of the two is the prior one is not quite obvious; perhaps the more finished and elaborate one of the two may nevertheless be the earlier. It represents a group of four draped figures, being the Virgin in a swoon, upheld by three female disciples. This group, which is immediately recognisable in the picture, nevertheless underwent various changes and modifications in the successive stages of the elaboration of the cartoon, and its final settlement on the panel. It is not, however, necessary to describe in detail the points of difference which exist. Doubtless the drawing was one of the detailed sketches which immediately preceded the cartoon. The companion drawing, although less elaborate, is perhaps more powerful and masterly in its execution, and is in the highest degree interesting in itself. It represents two figures, viz. the fainting Virgin and one of the females who is sustaining her, and three studies of heads of the females forming the group on a rather larger scale, drawn separately on the sheet. The most remarkable feature of this drawing, however, is that the two full-length figures, whilst in the exact attitude of the finished group, represent skeletons only, whereas those of the previous one display them as living draped figures. The drawing, therefore, confirms the indications of Vasari, to the effect that at a certain period of Raphael's career he entered upon a careful and laborious study of the human figure, both from the living and the dead subject, and that with this view he carried on the practice of dissection, or availed himself of the services in this respect of practical surgeons of his acquaintance. In all probability Vasari himself was acquainted with these very drawings, which, until within the last thirty or forty years, were preserved together in the family of the Marchese Autaldi, of Pesaro, to whom, with many similar treasures, they had descended by succession from Tomotes della Vite, the friend and legatee of Raphael himself. Both these drawings are engraved

in facsimile in Woodburn's 'Lawrence Gallery,' and one of them (that with the draped figures) had been previously engraved in the sixteenth century by one of the followers of Marc Antonio. The celebrated picture for which these studies were prepared was painted in 1507."

#### MR. WILLIAM MORRIS ON ART STUDY.

THE annual meeting of the Leek Art School was held last week, when the prizes were handed to the students by Mr. William Morris. Afterwards an address was delivered, in which Mr. Morris spoke of the importance of using their eyes diligently, as well as their minds and their hands, as a means of curing the bored and anxious expression of the Anglo-Saxon countenance. With regard to real artists, not pretenders to the title, nothing could be more noteworthy than the pains which they took: they were for ever bent on making the best of their talent. He urged those who had made up their minds to study art not to play with the matter. Most men had some gifts towards the arts which could be brought to light if they had opportunities for developing them, and that showed the meaning of the schools of art which had been established to teach people to use their eyes and to eschew drawing down blinds on sunlit landscapes. These opportunities for developing their talents would show them what they could attempt and what they had better leave alone. Nearly as many people could be taught to draw anything that would stand still as could be taught to write, but many people were incapable of learning to write. Now, though a man might draw well in a sense, and not be an artist in any sense, still the acquirement of the art would be useful to him even then, and it ought to be taught more widely and more systematically than it was, even looking at it from that point of view. If a man could learn to draw not only mechanically but artistically, and in such a way as to make it obvious that he had pleasure in the drawing, then he could lay claim to be an artist of some sort. In striving to find out what sort, he would doubtless have difficulties and disappointments, but all would come right in the end, so as he was honest in the work. There was room for artists of all capacities, from the greatest to the least; but to be a pretender, a bungler, was not to be a humble artist—it was to be no artist at all. All artists could not be Michael Angelos, but all could be worthy fellows and helpmates for him. Every great artist would do full justice to any piece of artistic work which was good and sound of its kind. But a great man who would be sympathetic, even indulgent, for all genuine work would have nothing but justice for empty pretence. Art students should remember this and not be too mild in judging themselves, however kind they might be to others. Ever so little of the artist added to a handicraftsman made him a better man to employ, to say nothing of the effect of art on himself, as giving some additional pleasure and interest to his life. The schools of art were not intended to turn out what were conventionally termed artists; they were intended, first for general artistic education, and, secondly, for the special education of those who made designs for industrial art. There must be no confusion of the different grades of artists, for such grades must exist, but there must be no sharp distinctions if they were to have art worth the trouble, widespread and "understood of the people"—if they were to have a popular art. If things continued to go on as they were now going there would be on the one hand a great body of artists so called, most of them turning out unsatisfactory work, not for lack of talent, but because their talent would be misapplied. They would be compelled to be more or less useless because they were more talented than their fellows, and so be set to supply fine arts, and not being really artists enough for that demand would have to supply a substitute for it which would receive very languid attention from the public in general, yet more attention than it would deserve. Above the heads of these would be a very few men of genius, who at the expense of great toil and suffering would have acquired real mastery over their art, and would produce works of a high quality, but which would not in the least be "understood of the people," partly from their fault or their misfortune, partly from the fault or misfortune of the people. All this would supply the languid demand for the more intellectual side of art: the fine arts; but there was still a demand for the less intellectual side—namely, the ornament of the industrial arts, that side of it which should be done by handicraftsmen. But how was that to be supplied if things went on as they were going? First at the top of the tree would come a very scanty, however precious, fruit—the art done by great men struggling under difficulties; then lower down the fruit would be tolerably plenteous, though unripe and of little use as it was; lastly, a very strange fruit indeed, which nobody would want, and which nobody would be willing to pay for, but which would go on being produced from a sort of habit. That would be the position of ornamental art, so called. There was one comfort, that such a state of things could not last very long. He should hope man would still have some longing for beauty left in him. Surely, first of all, he would remember that no pyramid could stand on its apex, but must stand on its base. He would know that before anything worthy to be called art could exist it must be longed for by the people, and he would look forward to the day when no one, save a few curious exceptions, men with



diseased minds, would fail to understand art and to demand his due share of it. In that day, though there would be gradations from the humblest to the most elevated, there would be no sham art, because every man who worked with his hands would find out his real and proper place and do his best in it, and between all handicraftsmen there would be mutual help and sympathy. To those who did not rightly know what art meant, or had not leisure or opportunity to think what a dull blank the total loss of it would make in all men's lives, the necessary sacrifices to be made before art could be born again might seem great, and over great if they could see them rightly all at once. He had taken note of many strikes, and he must needs say, without circumlocution, that with many of them he had heartily sympathised; but when the day came that there was a serious strike of workmen against the poisoning of the air with smoke or the waters with filth, he should think that art was getting on indeed, and that the schools of art had had a noble success. Meanwhile, he fancied that most of them would agree with him in thinking it was a hopeful token that all classes showed signs of uniting to prevent the robbery of commons, which till quite lately had gone on unchecked in England. The more individuals were kept in due order by the public, the more public rights were respected, the nearer grew the chance of the new birth of popular art. What he meant by art, what he was really interested in, was not the prevalence of this or that style, not the laying on the public taste, whether it would or not, a law that such and such a thing must be done, but rather a general love of beauty, partly for its own sake and because it was natural and right for the dwellers on the beautiful earth to help and not to mar its beauty, and chiefly because that external beauty was a symbol of a decent and reasonable life. Material prosperity was a thing which, according to their way of dealing with it, would be either the helpful servant or the cruel tyrant of civilisation. If it was still their servant, bid it give back to England the green fields which it had wasted; bid it turn its terrible power to the task of giving them something worthy to supply the place of the stored-up loveliness of ten centuries of which it had robbed the homes of England. And if they found that it would not obey them, and that it was their master and not their servant, what should they do then? Two courses were open to them. One was to pretend to believe all was well; the other was to resist the tyrant till he was reduced to the old condition of servant again. It was no light task, but the worst part of it was making up their minds that it had to be undertaken. There were those who now desired money unreasonably, and distressed themselves and their neighbours very much in the acquisition of it, who strove for it for reasons which would no longer exist if civilisation should get into the right road again. He knew some of the reasons of the nature of fencing oneself against the intrusion of barbarous ugliness, or the desire for the possession of works of art. The time would come when no one would need money for such purposes, for ugliness, in the work of man's hands, which was now the rule, would exist no longer; when there would be humble but satisfying art in private dwellings and lofty, soul-inspiring art in public places; in short, nature here unspoiled, there helped in her loveliness. Let them compare that with the track of waste and squalor which the misnamed monster Commerce left behind now, and join in hastening forward the day when the motto of their country should be "One for all and all for one."

### PROPOSED MUNICIPAL BUILDINGS, NOTTINGHAM.

THE Corporation of Nottingham invite designs for the new municipal buildings. The preliminary designs are to be sent in before March 15. The *Nottingham Guardian* says that a careful calculation has been made in the Borough Engineer's office of the supposed requirements which will have to be met. These are of the most various character, including the Town Clerk's and Clerk of the Peace's office, the Consulting Engineer's and Borough Surveyor's offices, the Borough Analyst's department, the Borough Accountant's office, Rate Collectors' offices, the Medical Officer of Health's and the Nuisance Inspector's offices, the offices of the Water and Gas Committees, a fire station, a central police station with cells and drill-shed, police courts with accommodation for the clerk and assistant clerks to the magistrates and for the magistrates themselves, and stores and other rooms needed to carry on the multifarious businesses of the town. The calculation shows that the least space which ought to be provided to meet these wants is about 100,000 square feet of flooring. As the cattle market altogether only contains about 120,000 square feet, it would be just possible to erect upon it a one-storey building giving the required area, and set back a very short distance from the surrounding streets. This, however, would absolutely fill up the whole of the site, and it is therefore proposed that the offices, &c., shall be placed in a two-storey building, which, affording equal accommodation, would only occupy half the ground, the other half being thus left for air and light spaces. It is not intended that the buildings shall be of a highly ornate character, and, indeed, it is not impossible that a distinct intimation may be given to competing architects

that any attempt to copy the style of architecture adopted in the University College, which is so near the site as almost to invite comparison, will not be considered favourably. The principal material to be used is brick, with stone dressing, and the whole erection will be made as unpretentious as a public building of the sort can well be. The cost, it is estimated, will be about 100,000*l.*, which it is hoped may be raised by the following methods:—By the sale of the existing town-hall, central police and fire station, gas and water offices, and municipal offices, about 70,000*l.*; by a call upon the funds of the gas concern, 20,000*l.*; and by a similar call upon the funds of the water concern, 10,000*l.* It is hoped that the plans of the competing architects will be in a condition to be laid before the committee about next March, and that other preliminary matters will then have so far advanced towards settlement that a substantial advance may at once be made. An opposition to the final adaption of a scheme of so great magnitude is developing itself, but to what extent it may go there are no present means of judging. Before any scheme involving the alienation of the cattle market from the uses to which it is now put be adopted, however, the antecedent condition must have been complied with that another suitable site on which to hold the market must have been found. This, it is thought, has been done in the Eastcroft, with the owners of property in which place negotiations have been for some time proceeding—negotiations which, if successful ultimately, will probably admit, in addition to the other works proposed, of the building of a wholesale fish market, where fish which has just been conveyed into the town by rail may be bought under the hammer, instead of being disposed of in the present unsatisfactory way to the different retail dealers.

### LEEDS ARCHITECTURAL SOCIETY.

A CONVERSAZIONE of the Leeds Architectural Society was held on Tuesday, at the new offices of the School Board, which were adorned for the occasion with works of art of various kinds.

The President of the Society, Mr. J. D. Fraser, F.R.I.B.A., supported by the leading architects of the town, early in the evening took up his position near the top end of the room, and gave a sincere and hearty welcome to those who had responded to the Society's invitations, and he expressed a hope that, with the valued help of their kind friends, whose names appeared on the programme, they would be able to spend a pleasant and instructive evening together. As you are doubtless aware, he said, the Society is now in the seventh year of its existence, and though comparatively young I am happy to say it is vigorous and flourishing, in spite of many difficulties, one of which has been the want of a permanent home, which we have now acquired. And we now hope that our future will be one of extended usefulness, mutual help, and prosperity. Although for many years past the medical and legal professions have had their societies and associations for instruction and social intercourse, the architectural fraternity have only recently (at any rate in the provinces) made an effort at combining for their mutual benefit as members of the same profession. Short as our existence as a society has been we are already beginning to feel the benefit of it, and to find that, principally through its means and that of kindred associations, the public are taking more interest in the doings and sayings of the architectural world. The recent revival, or rather I should say the birth, of what is popularly known as art feeling in this country, and which no doubt owed its origin in a great measure to the International Exhibitions of 1851, 1862, and 1867, has not only led to improved taste in the matter of dress, furniture, and other surroundings, but it has awakened a keen interest in the queen of all arts—that of architecture. So long as an intelligent and discriminating interest is taken in our art by an educated public, so long shall we be obliged, for our own good fame and honour, to do our utmost to act up to the highest traditions of our art. Before distributing the prizes, the drawings for which are placed in the adjoining room, I feel it is necessary to point out that the want of a settled habitation has also told very seriously against the classes, and, consequently, the work produced by the students, which I feel confident will be remedied in the future, as we shall now be enabled to enter into a more systematic course of instruction under the guidance, help, and encouragement of the senior members of the profession.

The prizes were six in number, and were as follows: A prize of two guineas, offered by the President for design for an hotel and drawing of an old house at Shipley, awarded to Mr. A. Gaunt. A prize of Ruskin's "Seven Lamps of Architecture," offered by Mr. John Tweedale, awarded to Mr. Alfred Williamson, for designing work done at the class meetings of the Society. A prize of an album, offered by Mr. J. R. Watson, and awarded to Mr. Frank B. Howden, for designs for a settle and two chairs. A prize of Sir G. Gilbert Scott's "Lectures on Mediæval Architecture," offered by Mr. Cribb (of the firm of Marsh, Jones, & Cribb), awarded to Mr. J. H. Roodhouse, for design in colour for the decoration of the side of a room. A prize of two volumes on "Building Construction," offered by Major R. W. Moore, and awarded to Mr. G. Stevenson, for an interior perspective view, in colour. A prize of



the Science and Art Department's volume on "Building Materials," offered by Mr. W. H. Thorp, and awarded to Mr. Alfred Williamson, for measured drawings of the old oak screen, St. John's Church, Leeds.

### HAMPTON COURT.

AT the inquest on the body of the woman who was burnt in the fire at Hampton Court, Mr. A. B. Mitford, C.B., Secretary of the Office of Works, said that about six years ago the system for extinguishing fires at the Palace was entirely reorganised. A brigade was formed of fifteen persons, of whom four were resident in the Palace. There were monthly drills, and they were periodically inspected by Superintendent Palmer, one of Captain Shaw's officers. Superintendent Palmer's advice in all matters relating to the brigade and fire services had been exactly followed. Mr. Palmer was recommended for this service by Captain Shaw, and in following his advice it was considered that what was done would have the approval of Captain Shaw. There were fifty-five hydrants on the main, which were constantly charged. In addition, there was a fire-main laid on the roof behind the parapet which would enable the firemen to deluge the whole of the roofs with water, and to the existence of this main he attributed the prompt extinguishing of the recent fire. There was a steam fire-engine of 30-horse power, capable of pumping about 700 gallons of water per minute and of throwing six large jets to the highest part of the Palace. The boiler of this engine on its trial raised 100lb. pressure of steam in ten minutes, there being 16° of frost at the time of the trial. Besides there were two manual engines and a fire curricule, three hand-pumps, a hose truck, seventy-five fire-buckets, and a fire-escape of Captain Shaw's pattern. In the picture-galleries were fourteen internal hydrants and twenty external hydrants. Six new corridor engines and two hand-pumps full of water were kept on the landings. Printed instructions, with full information for all persons about the Palace, were hung in prominent positions near the hydrants. The Palace fire brigade had been successful and had taken prizes at various competitions. With regard to the suggestion of placing a tank on some part of the Palace, it appeared to him that the main laid along the roof really gave greater security, for with the powerful engine to charge it there was practically the supply of the Thames. He could not suggest any additional measures that would be an improvement on those already provided for dealing with fires.

### BIRMINGHAM ARCHITECTURAL ASSOCIATION.

THE second ordinary meeting of the session was held on Tuesday last, at Queen's College, the chair being occupied by Mr. J. P. Osborne. The following gentlemen were elected and two others proposed as new members:—As honorary members, Messrs. W. Doubleday, G. R. Faulkner, S. Horton, J. King, James Ernest Stanbury (Barrister), and Thomson Plevins. As ordinary members, Messrs. C. E. Bateman, A. J. Craddick, A. Hale, T. W. F. Newton, and Tom A. Smith. After a paper by Mr. Norman Gething on "Hearts in our Art," had been read, a vote of thanks was accorded to the reader of the paper, on the motion of the chairman, seconded by Mr. W. G. Mantle, and supported by Messrs. F. G. Hughes, F. Simon, and the secretary, F. W. Franklin Cross.

### THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE fourth ordinary meeting of the Institute of British Architects was held on Monday evening; Mr. Ewan Christian, vice-president, in the chair. The death, on the 3rd inst., was announced of Count V. Vespignioni, architect to the Vatican at Rome, and corresponding member. A paper, followed by a discussion, was read by Mr. Gale, the holder of the Godwin bursary. A report of the proceedings will appear next week.

**The Regent's Canal and City Railway.**—The Regent's Canal, City, and Docks Railway Company, which obtained an Act of Parliament last session, after a protracted and expensive contest in the Parliamentary committee-rooms, have commenced the purchase of lands along the line of route, with the view of immediately entering upon the construction of the line, and have just completed an important purchase in the neighbourhood of Aldersgate Street. The project includes the construction of a station in that locality, not far from the Aldersgate Street Station of the Metropolitan Company; and for the station of the new company, and the general purposes of their undertaking, the company have just purchased the large area of land on the south-eastern boundary of the City in Golden Lane. The land, which has for some time past been vacant, and which contains 45,336 feet, has been bought from the local authorities for the sum of 80,592*l.*, being at the rate of nearly 2*l.* per foot. It is stated that the purchase-money is intended to be applied to the erection of artisans' dwellings in Petticoat Square, eastward of Golden Lane.



### An Evening at the "Institute."

SIR,—It is now thirty years and upwards since, as a student at the Institute, it was my privilege very regularly to attend its meetings. Then the prominent figures in the old room in Grosvenor Street were Professor Cockerell, Professor Donaldson, Mr. Fergusson, Mr. Tite, Mr. Papworth, and occasionally Mr. Gilbert Scott and Mr. Edmund Sharpe; Mr. Bailey and Mr. Scoles acted as secretaries. On the 4th inst. it was my pleasure to attend the meeting for the first time since becoming a member. One's memory went back to former days, and the impressions of those days revived; they contrasted strongly with those of to-day's experience. Let me not presume to say favourably or unfavourably, but the whole tone and manner seemed changed. Reflecting on the why and the wherefore, the conclusion which predominated in one's mind was, that competition and the spirit of competition had wrought the change. The subject of the evening appeared to me as a stranger to be treated on one side and on the other with a bitterness which did not come altogether of the love of art, or of friendly professional association. But it is to the subject itself—notwithstanding that it was tacitly voted out of time—that I would venture with much diffidence to recall attention.

Though holding a very strong opinion as to the general merit of the design exhibited last Monday evening, and also as to that shown at the Academy during last summer, I would now confine my observations to a single point in the controversy. Mr. Ewan Christian, in criticising what had fallen from a previous speaker, took us back to the intentions of the architect of St. Paul's as to the decoration of the building generally. He could not have pointed to a more fitting consideration. Let his observation be carried further, and taken to the dome itself. What did Sir Christopher Wren do with it? He treated every other portion of his building architecturally. The dome he left a plain surface. Is it to be supposed that this was accidental? or that, as its designer, he had not finished with it? Was it not rather, considering its form, its distance from the eye, and the proportion of light which he had given to it, that it was his direct intention that its surface should remain flat, and its treatment should be of that character and not, in mockery, painted architecturally? Had he wanted deep recess and high relief, why did he not structurally provide them? In the room of the Institute there is what might perhaps be called a miniature dome. It has ribs and coffers, and was, no doubt, intended to be architectural. Suppose it were desired to decorate this feature, and the artist employed proposed to fill up all the coffers, and to reduce the surface to a plain one. What would the Council say to this? Is it likely they would accept it as a true interpretation of the original design? It is unlikely. Then may it not be with equal reason asked, when Sir Christopher Wren left his dome as a plain surface, why should it be architecturalised after one fashion or another?

There were two schemes before the meeting, one elaborated, the other roughly but cleverly sketched. Did either satisfy those who have thought about the subject? Nay, more! Did the model of the two great artists exhibited in the summer do this? Did not even the enthroned figures in that design appear in perilous situations? Was there not a consciousness of uneasiness about the whole treatment? Of the design brought forward by the reader of the advertised paper there is perhaps little to be said in its favour, as its principles of treatment really appear to revoke the intentions of the designer of the dome. Of the sketch and description given by Mr. Stannus of Stephens' design no mature judgment could be formed, as they offered but inadequate data. The observations by Mr. Armitage the painter, and by Mr. J. P. Seddon and Mr. Neville, rather pointed to the idea that elaborate pictures in the dome were not desirable; and, indeed, that they would be practically useless because invisible from the floor to a great extent. This idea was not carried beyond a mere suggestion, but is it not one which is worth pursuing? It leads to the view that neither an elaborated architectural treatment nor a pictorial one in high relief is advisable, but that everything suitable to the circumstances of the case might be attained from a flat style of treatment. As to subject. Suppose that one of our great landscape painters were asked to paint the dome as a simple sky effect, choosing his own time of morn, even, or noonday, and dealing with it with a view of reproducing some faithful aspect of the dome of heaven. Would not that be as much as most critical visitors to St. Paul's would be content with? But a flat style of treatment would not be inconsistent with a figure subject. The great doom of mankind would be an appropriate one. The Great Judge as a central figure, with His holy angels accompanying Him, and then on the right hand and on the left the righteous of all nations and kingdoms who will first rise to meet Him.

Judging from his writings, it seems to have been a long-cherished ambition of the late Sir Gilbert Scott to build a large Gothic dome, but it never was gratified. As a frontispiece to his



"Mediæval Architecture" he gives a rough sketch of a dome treatment as designed by him for the Law Courts. Is there nothing in this appropriate or suggestive in the matter of the treatment of the decoration of the dome of St. Paul's?

Yours truly,  
C. L.

December 9, 1882.

#### Dublin Science and Art Museum.

SIR,—Referring to the article on the above subject, I beg leave to state that the writer is in error as to the question which is now being debated with most interest here. It is the question of the *site*, and not of the *design*.

Your obedient servant,

J. RAWSON CARROLL, F.R.I.B.A.

176 Great Brunswick Street, Dublin :

Dec. 13, 1882.

#### Middlemen in Art.

SIR,—The *cause célèbre* which is at present attracting so much public attention, and more particularly the attention of artists of every kind, is, I think, one that cannot fail to be productive of some good; and whether or not the gentleman whose artistic merit is called in question deserves the epithet which has been applied to him, the result of the trial is likely to be wholesome and purifying. That some so-called artists and authors contrive by a judicious application of the persuasive guinea to reap the honours and rewards due to works which they have not executed, and could never hope to, is a fact pretty well known to most of us who make our living by our art; and that this state of things is an institution as old as it is ugly we are told in Isaac Disraeli's "Curiosities of Literature," where some very startling instances of literary imposture are revealed. Indeed, it is pretty certain that matters have been in a much worse state than they now are, though their present condition is far enough from being a satisfactory one. Such a trial as that now pending is probably a great surprise to many of the general public, who would scarcely expect to find the huckstering spirit rife among artists, and would never have looked for such malodorous reports among men of eminence and fame. To them this case will come like a revelation; and if, as will most likely happen, it determines them in future to bestow their commissions more warily, the consummation will be a happy one.

The reason of the existence of such imposture originates, I think, among artists themselves. It is, unfortunately, the case that business acumen is but seldom the companion of excellence in art. The artist is too often thriftless, generous, and careless in matters mundane. With the gifts of a Turner for painting, or a Foley for sculpture, he is in business affairs the inferior of any solicitor's office-boy. This fact is only too readily and joyfully grasped by those who supply a lack of artistic merit by a decided mercantile talent and a not too nice sense of honour—the middlemen, in fact, whom the public so bountifully fees, and would so gladly dispense with. It is devoutly to be hoped that these gentry will receive a blow where they feel it most—namely, in their pockets.

In our own profession—by which I mean architecture—middlemen are not unfrequent. By these I do not mean men who allow important work to be done by an assistant; for it is, of course, obvious that an architect may and must receive a far greater share of skilled assistance than would be becoming in a sculptor or painter. But I have known and know now of men who are utterly destitute alike of practical knowledge and artistic talent, men who are incapable of doing anything whatever by themselves, and who yet enjoy not only a lucrative practice, but the fame which of right belongs to some retiring artist in their office, whom they in turn remunerate sparingly enough. The practice of men like these cannot but be ill-conducted in the main, and they reflect little credit on our profession as a body. Dirt, we are told, is matter in the wrong place, and these gentlemen are certainly in their wrong place. I cannot help thinking that it would have been not only better for us, but better by far for them, had they made choice of some other calling, for surely their talents are thrown away in a poor profession like ours; when had they but elected to be butchers or hucksters, they might soon have had both hands deep in the pockets of the public.

There are again within the pale of our profession men who, on the strength of knowing of one or two clever draughtsmen and designers, who are glad of any employment, will advertise themselves as ready to undertake any kind of work on moderate terms; when they have obtained it, they sub-let it to the artist on considerably *more* moderate terms, and realise a fat commission at the expense of the profession to which they cannot properly be said to belong. It would surely promote a healthier state of things if architects would endeavour to make sure that they are dealing with the artist at first hand, and so dispense with these agents—barnacles who stick to the bottom of the architectural craft, and who might be cleaned off with much advantage.

The middleman, it has been said, *must* "live." But as Tallyrand said, "Je n'en vois la nécessité." So say I, and I think so say all of us.

I am, yours, &c.

W. M.

#### LEGAL.

##### Court of Sessions, Edinburgh. Second Division.

(Before the Lord Justice-Clerk and Lords YOUNG, CRAIGHILL, and RUTHERFURD CLARK.)

DAVISON AND OTHERS v. JAMES RITCHIE. MILNE v. JAMES RITCHIE AND OTHERS.

THE respondent in these reclaiming notes, James Ritchie, a builder, St. Andrews, raised an action against the reclaimers, William Davison, hotelkeeper, and John Gamble Paterson, club-master, St. Andrews, for payment of 395*l.* as the balance of the price due to him by them for work done in the building of two villas at the Scores of St. Andrews. In support of his claim, Ritchie said that John Milne, the architect for the defenders, had accepted his offer to do the work, and had the authority of the defenders to accept his offer to do the work for 1,646*l.*, and that they afterwards homologated his acceptance of it; and, also, that it was a custom of trade for an architect to have power to make such contracts on behalf of his constituents. The defenders, on the other hand, denied Milne's authority to accept an offer higher than 1,447*l.*, the alleged custom of trade, and their alleged homologation of the contract. The Lord Ordinary (Kinneir) gave judgment for the pursuer for the sum sued for, and found the defenders liable to him in expenses. In the second action, Milne asks the Court to set aside the contract for 1,646*l.* on the ground that it was obtained from him by fraudulent representations and concealment on the part of Ritchie, and was granted under essential error; and also to set aside a decree in absence obtained against him by Davison and Paterson in an action of relief. The Lord Ordinary, in this case, sustained a plea maintained for Ritchie, the builder, that Milne had no title to sue, and dismissed the action as against him, allowing it to proceed as against Davison and Paterson.

The Court (Lord Rutherford Clark dissenting) recalled the last-mentioned interlocutor of the Lord Ordinary, repelled the plea stated for Ritchie against Milne's title to sue, and remitted the case to the Lord Ordinary, on the ground that, in the position in which he is now placed between the builder and the owners of the villas, the architect has a material interest for seeking to be restored to the position in which he was before the contract was signed. In the other action of payment, their Lordships continued the case to allow the owners to consider whether they will sist themselves as pursuers in the action of reduction.

#### ARCHÆOLOGY.

**Sandown Castle.**—The demolition of all that remains of Sandown Castle, near Deal, which was temporarily suspended by order of the War Office authorities, is now proceeding. When the work was commenced it was thought that it would require only the pick of the excavator to disintegrate its masonry; but this has proved quite the contrary, in a way which has astonished the officials of the Royal Engineers Department, under whose direction the work is being carried out. So firmly are the blocks of stone and other material set in the cement in which they were originally laid that they can only be removed by blasting. The excavations are now proceeding in what was originally the gun rooms of the castle and the basement, where the strength of the structure is very remarkable, the cement in many cases proving harder than the stone employed. Up to the present time about one-third of the castle has been demolished, the quantity of material removed being about 500 tons. The material is being conveyed by rail to Dover Castle, where it will be used, in accordance with a suggestion by the Archæological Society, in the construction of a residence for the General Commanding the South-Eastern District, at Constable's Tower, near what is known as the "old entrance" to the castle.

**North Gosforth Chapel.**—At the last monthly meeting of the Newcastle Society of Antiquaries Mr. Sheriton Homes read an account of recent investigations made by him in and about the ruins of the ancient chapel at North Gosforth. He stated that of the history of this chapel but little seemed to be known. In all probability it was, like its neighbour at South Gosforth, a chapel of ease to St. Nicholas'; for in the year 1598, the same curate, Umfrid Sicomen, did duty at both places. The architectural remains of the chapel are very meagre, but from the dado, with its splay course running all round the walls, and the character of the doorway, it may probably be dated about the time of the transition from the Norman to the Early English style of architecture, or the early part of the twelfth century. The building is simple in plan, consisting of the chapel proper (equivalent to the nave in larger structures), 38 feet 5 inches by 17 feet within the walls, and a chancel 18 feet 5 inches by 14 feet 4 inches. The whole of the walling was trenched round to the foundation, inside and outside of the building, and carefully examined, but no trace of Roman inscribed stones were found, other than the one in the east wall, noted by Mr. John Bell in 1826. He showed sketches of the building, and of the various sculptured stones found, including a Roman altar; and as Mr. John Bell in 1826 made no mention of



the Roman altar it must have been found since he wrote. This stone has a moulded base and head, but is much weathered, and the inscription eaten out; on the ends, however, with the aid of a side light, may be made out the usual sacrificial implements. Generally throughout the graveyard portions of earthenware vessels and red tiles were found, but in a very fragmentary condition; and the presence of such a variety of pottery, and of the Roman altar, seem to indicate a use of the place as a place of sepulchre from very ancient times.

### TOWNS IMPROVEMENT.

**The New Schemes of the Metropolitan Board of Works.**—Notification has been given by the Metropolitan Board of Works of their intention to apply for leave to bring in three Bills in the ensuing session of Parliament. By the first the Board will ask for powers enabling them to alter or reconstruct the existing bridge over the Thames at Hammersmith, and to stop all traffic during the operations, and authorising them to build a temporary bridge during the alteration or reconstruction of the existing bridge. They will also ask for authority to charge the maintenance and repairs of the carriage and footway of the approach roads to the altered bridge, or a portion of it, on the Fulham District Board of Works and the Mortlake District Highway Board. The Bill will further contain provisions authorising the transfer and vesting in the Board of the undertaking and property of the Poplar and Greenwich Ferry Company, and the abolition of all rights of levying toll on or in respect of the roads known as the East and West Ferry Roads, Poplar. By the second Bill the Board will ask for powers enabling them to amend or repeal sections 32 and 33 of the Metropolitan Streets Improvements Act, 1877, or either of them, so far as they apply to the new streets and street improvements authorised by that Act, and therein described (section 4) under the title of "West End New Streets and Street Improvements," and to make provision as to the accommodation in dwellings of some of the persons belonging to the labouring classes referred to in the 33rd section. The Board have frequently complained of being seriously hampered by the restrictions imposed on them by this section in carrying out projected street improvements. The latest phase of the difficulty was the recent action brought by Mr. Spencer against the Board. Clauses will be included in the Bill conferring on the Board further powers for taking and dealing with the houses referred to in the sections mentioned and for acquiring all interests therein; to confirm (if need be) any purchases, sales, or other dispositions of land, houses, or property under the provisions of the Act alluded to, and any agreements and notices served, or proceedings taken or pending, or payments made by the Board with relation thereto; and to render them valid and effectual, "notwithstanding that some of the provisions of the said sections or one of them may not have been complied with." Authority will also be sought to explain and define the meaning of sections 32 and 33 or one of them. In the third Bill the Board ask for authority to make various new streets and street improvements, &c., within the metropolis, for the compulsory purchase of land and houses, and for other requisite powers in connection with the projected works. One of these improvements involves the construction of a new street from the Holborn Town Hall to St. John Street Road, near the Angel, Islington. It will commence opposite the Holborn Town Hall at the junction of Gray's Inn Road and Clerkenwell Road, and terminate on the western side of St. John Street Road at its junction with Myddelton Place. Another of the projected improvements is a new street in continuation of the street authorised by the Metropolitan and Metropolitan District Railways (City Lines and Extensions) Act, 1879, commencing within the district or Liberty of the Tower, at or near the junction of the street with Trinity Square, and terminating in the district or Liberty of the Tower or the precinct of Old Tower Redoubt, at the drinking-fountain at the southern end of the Minories.

**New Shoreham, Sussex.**—Although the commercial fortunes of this quaint and once important town and port have been in a somewhat drooping state, there are signs that commercial men see its position as being one capable of considerable development. Possessing an abundant supply of pure water, healthily situated under the South Downs, placed midway between Portsmouth and Dover, and rich in history, it is bound to reassert the right to the title of being the "Liverpool of the South," especially as it has become tired of being left out in the cold by the London, Brighton, and South Coast Railway, which has a junction here. It is moving with Brighton in favour of the scheme on foot for a new railway connecting the northern counties and the city of London with it. An extensive building is in contemplation for the manufacture of soap, &c., plans for which, prepared by Mr. Arthur Loader, architect, &c., of Brighton and Shoreham, have, after searching examination, been heartily approved by the Local Board; while a North German firm and a firm of manufacturers north of the Tweed are making inquiries for premises securing a southern outlet as well as good railway accommodation.

**A Project** for tunnelling the Simplon is said to be contemplated in France.

### GENERAL.

**Mr. J. E. Boehm, R.A.**, has been commissioned to execute a marble bust of the late Archbishop of Canterbury.

**Mr. W. J. Muckley** has resigned the post of director and principal of the Manchester School of Art. He was appointed to Manchester in 1862.

**The Art Gallery** of the Peel Park Museum, Salford, has been presented with *A Portrait of Thorwaldsen*, executed by E. Sauti, after Horace Vernet's picture in the Copenhagen Museum. The donor is a former mayor of Salford.

**The Statue of Earl Beaconsfield**, for the National Memorial, is to be cast to-day (Saturday) at Messrs. H. Young & Co.'s works, Pimlico.

**The Statue of the Queen**, by Mr. Woolner, R.A., commissioned by the Committee of the Prince Consort Memorial Fund in Birmingham is now on the eve of completion.

**The Edinburgh Town Council** have decided not to apply for a provisional order under the Electric Lighting Act.

**A Hospital** erected in Glasgow for sick children has been formally opened. The architects of the building are Messrs. Campbell Douglas & Sellars.

**The Clothworkers' Company** have made a donation to the Rev. H. Solly in aid of the establishment of technical classes in the metropolis on the plan of those conducted at the Artisans' Institute.

**The County Court at Birmingham** has just been fitted with one of Clark, Bunnett & Co.'s safety lifts. This company are also fitting their patent self-coiling shutters to the new forts at Lerwick, the Prince's Landing Stage at Liverpool, and the Woodside Ferry, Birkenhead.

**The Liverpool Art Club** will open in February a memorial exhibition of the works of the late Mr. H. K. Browne.

**The British Museum** has received from Cyprus a consignment of curious, small, half-round figures in terra-cotta, mostly draped female divinities rudely modelled after archaic types, and found at Salamis. The Museum has been enriched by a set of the rare prints illustrating the "Triumphs of Petrarch," the designs of which have been ascribed to Fra Filippo. They were found in a volume of poems which formed part of the Sunderland Library, and were sold for 2,000*l*.

**Mr. W. W. Gwyther, F.R.I.B.A.**, was on Monday evening last entertained at dinner at the Café Royal, Regent Street, and presented with a testimonial by his assistants and pupils past and present. Mr. J. W. Stevens, A.R.I.B.A., presided. The testimonial consisted of a morocco album, mounted in silver-gilt, and contained photographs of the subscribers. It was enclosed in a polished oak case and accompanied by an illuminated address on vellum.

**Messrs. John Warner & Sons** have been awarded a silver medal at the Cornwall Mining Institute Exhibition, held last week at Camborne, for their exhibits of mine pumping machinery and pumps and mining tools, which elicited much praise, the president saying that no such exhibit had been made by any firm in the county before.

**The Liverpool Town Council** on Wednesday decided to apply to the Board of Trade for a provisional order authorising the construction of tramways to connect the existing lines within the city, and also to go into new districts both inside and outside the city boundaries.

**The Tender** of Mr. S. Foster, of Kempston, has been accepted, subject to the approval of the Charity Commissioners, for building new class-rooms at the Grammar School, Bedford. Mr. Basil Champneys is the architect.

**A Meeting** has been held in Liverpool to promote the erection of a new hospital which is to cost about 100,000*l*. Towards that amount a sum of 79,000*l*. has been secured.

**Mr. T. Gambler Parry** distributed the prizes in the Cardiff School of Art on the 15th inst.

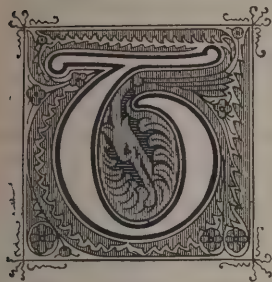
**The Committee** appointed by the Metropolitan Board of Works to investigate the condition of the London theatres with a view to the protection of the public against fire are continuing to hold frequent meetings. They have under consideration various plans for lessening the dangers which have excited so much alarm.

**The Dean of Llandaff** reopened on Thursday, last week, the parish church at Abergavenny. The lately deceased bishop, who was then very ill and unable to be present, wrote on the occasion as follows:—"The rescue of Monmouth Church from the Palladian style forced upon it in the last century, and of Abergavenny from the barbarism of the early part of the present, are, next to the rebuilding of the cathedral, the most inspiring instances of improved taste, and, I hope, of Church feeling that have occurred in the diocese. Thirty years ago they would have been deemed impossibilities."



# The Architect.

## IRON ARCHITECTURE IN THE UNITED STATES.



HE very practical and sensible endowment which Mr. GEORGE GODWIN bestowed upon the Institute of Architects last year has already produced a useful return, in the form of a traveller's report on the condition of architectural practice in some of the leading cities of the United States of America, which was presented and read at the last

meeting of the Institute by Mr. A. J. GALE, the first holder of the bursary. The visit of this gentleman to the empire of our transatlantic cousins was not a prolonged one, but affairs move so quickly in America that even travellers get over their ground at high pressure, and the paper before us shows that Mr. GALE has followed this rule with every advantage. He did not go West to San Francisco, nor South to New Orleans, but what was to be seen at New York, Boston, Philadelphia, Chicago, Baltimore, Washington, and some minor cities, he is in a position to comment upon with much intelligence, and not a little enthusiasm.

The position of these American towns in the modern architectural world is peculiar. Leading practitioners in a good many instances are found to be working upon the basis of a direct European education, that is to say, as American pupils of London offices and Paris *ateliers*; and, still more noticeably, there are many others whose manner of design is specifically derived from the numerous illustrations of English and French current work which are published from week to week in professional journals; but nevertheless the fact is not to be disguised that the American temperament is still characteristically independent in architectural art as in all else, while in respect of constructive science and inventive appliances it must be said frankly that the precedents of European practice are always received with the full amount of customary scepticism, even if they were not in very many instances ignored with the customary manifestation of self-confidence. What the English visitor, therefore, has to expect to meet with in the way of building novelty is, in the first place, a good deal of remarkable artistic device more courageous sometimes than commendable, and almost any amount that he will take the trouble to discover of what used to be called Yankee ingenuity in building contrivances of all kinds; and it is not too much to say that in both of these respects the theory to which, it will be remembered, Mr. GLADSTONE gave expression a few years ago—that North America is to take the lead of Europe in the next historical development of civilisation—may be considered by its adherents to be sufficiently well illustrated.

As regards art—at any rate, the more grandiose and refined part of art architectural—it may be argued with reason that we are brought face to face more than at home with the growing neglect of such a cultivation of the fancy as prevailed so universally (not to speak of previous instances) in the Middle Ages, and which in modern times has been even still more developed. In France, this neglect does not seem to have yet assumed prominence, but in England we must acknowledge that it has. In all French towns, as a rule, even minor opportunities are still accepted for endowing building operations with complete grace and elegance; whilst public edifices are, as matter of ordinary obligation, designed with the very utmost care, so as to be worthily regarded as national monuments. In England, on the other hand, although we rejoice to admit that the employment of educated architects is every day extending, yet it would be idle to deny that in too many instances the doctrine is unmistakably recognised that artistic design is a superfluity; indeed, sometimes it is but too plainly affirmed to be a mischievous one. In America, therefore, if Mr. GLADSTONE'S principle is to be correctly interpreted in itself, and correctly applied to passing events, we should expect to find the English attitude considerably exaggerated; and so it is. The appreciation of academically artistic building by the multitude, if necessarily small in England, must be still smaller in America; and the doctrine that grace, as commonly understood, may be

dispensed with on principle we can easily understand to be in America not a mere commercial vulgarity, or a consequential affectation, as it is with us, but rather a patriotic principle, affecting the recognition of exotic precedent in opposition to indigeneous indiscipline. The employment of iron to take the place of stone or brick walling, in the character of an American material which is entitled to have an artistic style of its own, is a case in point.

When we hear of a "street front" composed of a cast-iron framework enclosing panelling of brickwork, and having cornices made of galvanised sheet, there are probably few architects in England whose critical powers, however imperfectly cultivated, will not instantly and instinctively reject such a device. But if we were to say nevertheless that this odd kind of art is essentially English, or Anglo-Saxon, or Cockney, or whatever epithet may be most expressive of the circumstance that it is only something of our own after all, however much carried to excess in another quarter of the world, it would be at least difficult to determine that it belongs to any other national category. It is not necessary to despise it so far as this argument goes; we have only to wonder at it a little as an act of daring. The late Mr. STREET on one occasion, in debating some question about iron architecture, made use of a very singular characteristic expression; "We ought to be content," he said, "with the materials which God has given us." He meant, of course, one may say, the materials which belonged to the practice of authentic mediæval architecture, amongst which cast iron had manifestly no place. But it is equally manifest that the modern mind, and especially the modern British mind, could not possibly accept such a dogma; and, indeed, Mr. STREET himself, in the Palace of Justice, had to confess at last the obligation which modern usage laid upon him by employing iron in violation of his own principles. Probably as good an illustration as can be supplied to indicate the connection which exists between iron architecture and the American idea of "going ahead" may be the suggestion that to go ahead in ironwork without restraint is exactly what Mr. STREET, as an ultra-conservative, would have expected the American architects to do.

There are two systems, it appears, of go-ahead iron architecture as practised in America; one called "the skeleton," and the other "the block." Reverting to the first principles, and taking an artistic view of the matter only, we may say that the two systems ought to be described thus:—First, there is the use of columns and beams or arches; and secondly, there is the introduction of iron framing, more or less concealed, for the strengthening of what would otherwise be a too slightly built wall. We do not gather from Mr. GALE'S report that either the column-and-beam principle or that of the arch is being developed to better purpose in America than in England. Indeed, if we mistake not, there are several iron "street fronts" in London already, which are constructed precisely on the American model; and, we may add, so very indifferently designed that the passer-by certainly does not admire them, and only looks at them, if at all, as eccentricities of a particularly vulgar kind. As for the second type, in which an iron framework supports "filling in" composed of unsubstantial brickwork, terra-cotta panels, concrete slabs, or iron plates, this, it would seem, has not been tried at all in England in any serious way; and, if we may tell the truth, we take leave to hope it will never be tried. Prejudice, we well know, is blind to its own prejudices; and no doubt, speaking for not a few of our best architects, and even more of their less pretending brethren, we must confess to a very decided prejudice against iron "street fronts;" but such a thing as a row of houses in Regent Street—when Regent Street comes to be rebuilt—constructed with highly ornamental façades of metal framing filled in with panels of whatever handy material may best serve a cheap decorative purpose, we can only regard as a box and not a building, even if the panels were of the choicest marbles and the "skeleton" of silver and gold.

When it is said that "a style for cast iron architecture has yet to be evolved," and that "the problem of its satisfactory treatment is yet unsolved," we are bound to observe that the principles upon which alone such a style of treatment can be based—that is to say, artistically constructive treatment—are to a very considerable extent sufficiently well understood in England, France, and Germany, if the problem were worth solving. There can be no doubt that if a competition were to be just now set on foot for the design of a Crystal Palace, for example, in a thoroughly philosophical or critical style of art, not only should



we have many carefully considered projects sent in, but quite the usual proportion of successful ones would be discovered amongst them. Street fronts, however, are another thing. Let us plainly say we do not want them, in either cast iron or malleable iron or anything else of the sort. The desire for them in America we can only regard as a symptom of mistaken taste both in building and in art. If the votaries of artistic ironwork will be satisfied with permission to develop it in the difficult interior work which so frequently has to stand behind street fronts, this again we can encourage as a perfectly legitimate field for the exercise of refined ingenuity; and we see no limit to the artistic *finesse* which such a material might then call forth. Here we may gladly admit that a style worthy of the occasion has yet to be evolved, and we will go farther and commend to the best architectural talent of both England and America the problem of its treatment.

## IN SERVIA AND ROUMANIA.

[BY A CORRESPONDENT.]

BY way of sequel to our article "In the South of Hungary," we will now accompany, on their return journey, those members of the Iron and Steel Institute who made the extreme excursion in connection with their autumn meeting at Vienna.

Leaving the domain of the K. K. Priv. St. E. Gesellschaft, and headed by its director, M. LÉOPOLD BRESSON, the little party reached that company's Bazias terminus on the Danube, about sixty miles below Belgrade. Bazias means "the ever windy," an appellation which was certainly not belied on this occasion. After examining the elegant station buildings and the port, the party went on board the Danube Steam Navigation Company's boat for a trip on the most beautiful portion of the Lower Danube, having Servia on their right hand and Hungary on the left.

Proceeding down the stream and leaving the Ausläufer of the Carpathian mountains on the left hand, the little town of Moldova, where the Company's silver ore is smelted, soon came in sight. Shortly afterwards, with high cliffs on either side, the pointed Babakay rock rises in the middle of the river, and a good view of the imposing remains of the Golubacz fortifications was afforded, owing to a slight derangement of the screw propeller. In the cliffs are some ancient clefts called "Mückenhöhle," whence in summer issue swarms of especially venomous gnats, whose bite is said to be death to a horse. Then follow the rapids of Stenka, Apa Serena, and the Buffalo-Gruppe, and soon afterwards the Hungarian town of Drenkova, with the minaret of its Greek Church glistening in the afternoon sun. After passing the cataracts of Izlacz and Tachtabia, and rounding the Greben Fell, the river suddenly widens into a large bay, on which is situated the Servian town of Milanovac, while a little lower, on the left, are the remains of three old Roman towers, the "Tricule," boldly placed on a projecting cliff.

After doing justice to the *table d'hôte* on board, in which figures the rich fish of the Danube, called "Schil," we pass the Jutz rapids, and then the Tissovica Colliery, which was visited by some of the members from Orsova. The coal is in the Lias formation, in fact the measures are pronounced by an eminent authority to be exactly the same as those of Anina-Steierdorf, referred to in a previous article. Owing to the remarkable distortion of the seam, the coal is 100 feet thick, almost too thick for proper working. The colliery has been worked for some years by the English firm of LYELL & Co.; but a few more years will be required to thoroughly develop it. Besides the coal, which is of good quality, a rich deposit of iron ore has been found, and also some excellent fire-clay, so that circumstances are largely favourable for starting a blast furnace.

After passing Tissovica, the most imposing portion of the voyage begins. One is reminded of the Avon at Clifton; but the cliffs are about three times as high. On the small patches of verdure here and there black Egyptian sheep are seen; and black eagles hover over the steamer, though high up in the air, ready to pounce upon any chance prey. The Danube now becomes narrowed into a channel of only 165 mètres wide, but 60 deep, with colossal cliffs, rising like irregular walls on either side. On the left bank is the celebrated Szecheny-Strasse; and on the right holes at regular intervals are seen in the perpendicular rocks, in which the old Romans inserted the timbers on which a roadway was laid. In the middle of this narrow pass is the Kasan Whirlpool; and in the cliff on the

Hungarian side the Vetterani Cavern. At the village of Dubova the width of the river becomes still more reduced, its narrowest width being 112 mètres. The gorge terminates at Ogradina, just below which, on the Servian side, may be distinguished the Trajan tablet cut in the solid rock, though it is now blackened by the smoke of gipsies' fires. Leaving Jeselnicza on the left and Tekije on the right, the steamer comes to her moorings at Alt-Orsova, the last landing place in Hungary.

The town of Orsova possesses little architectural interest, except that the traceried panels under the windows of some of the houses denote their Turkish origin. We put up at the "König von Ungarn," the bedrooms of which, in the second storey, open directly on to a balcony running all round the courtyard, after the manner of an old English hostelry. The chief interest lies in the motley groups seen in the market-place and on the landing quays. Besides Germans and Hungarians, one Englishman, one Englishwoman, and a Frenchman, there are Servians, Roumanians, and Bulgarians; turbaned and mishmac'd Turks, a few Greeks and Italians, and a colony of Zigeüners or gipsies. The Roumanian women carry their babies in a wooden cradle, slung over the shoulder. Here, to the strains of the capital town band, one may see the national Hungarian dance, the "Czardas" (pronounced Schardash), executed with all its spirit and abandon. It consists of two distinct parts, a slow and a quick movement, the air of the first being remarkably weird and mournful; and then, after a pause, during which the dancer takes his partner by the waist with both hands, it is difficult for the eye to follow the rapid movements of the glistening feet.

We accept the obliging offer of a seat in the "wagen" of M. BLot, general manager of the "Société Anonyme Lyonnaise pour l'exploitation des forêts," and drive along the Danube to Ogradina, where the timber is sawn for sending to France, Belgium, Turkey, Roumania, Bulgaria, and even England. Only oak is worked, beech not being worth the carriage. Two hundred men are employed in the forest, and fifty in the saw-mill. Although only started in June last, the works are in full swing, and are on the point of being kept going day and night. The steam-boilers have stepped grates for burning sawdust and refuse wood. The single-cylinder horizontal engine, fitted with expansion-valve at the back of the slide-valve, drives the shafting, which is carried under the floor, and belts from pulleys transmit the motion to several saw-benches. A band-saw (made by E. TOPHAM, Vienna) rapidly takes a slab off the log clamped to a travelling carriage, so as to afford a level surface for subsequent operations by the circular-saw. The works' manager is M. DOMINIQUE LE TEO, formerly engineer in the French Navy, who obligingly gives us every information. It was a glorious day, and on the return journey the beams of the sun, fast approaching the horizon, light up the rich foliage of the trees on the mountain sides, and the gorgeous costumes of the Roumanian peasants, who stop to gaze on a stranger with a similar interest to that with which they are regarded. On the right flows the Danube, full and wide, hastening onwards after having emerged from the narrow gorge in which it has been confined. The glittering surface is broken here and there with a "chaika," or large boat, and sometimes four of them are bound together into a raft for conveying timber down the stream.

Crossing the Gerna, a tributary of the Danube below Orsova, we enter upon the Kunst-Strasse, a straight road, lined on either side with tall poplars, leading to the Kron-Kapelle. This is a Gothic building, octagonal in plan, with alternate courses of white stone and red brick, surmounted by an Oriental minaret, built over the spot where KOSSUTH buried the Hungarian crown and other insignia during the war with Austria. Near it rises the Allionberg, whence a beautiful view is afforded of the corners of Hungary, Servia, and Roumania, which here meet, and also of the Turkish island of Ada Kaleh, in the Danube, with its extensive but now dismantled fortifications. Indeed, one may easily breakfast in Hungary, dine in Roumania, partake of muddy coffee in Turkey, sup in Servia, and return to rest in Hungary.

The island of Ada Kaleh was in 1878 occupied, though not annexed, by Austro-Hungary, and a company of Austrian soldiers is permanently stationed there. With this exception, and that of three families of Roumanians, the inhabitants are exclusively Turks, who have their own government under the Mudur (or magistrate) BEKIR EFFENDI, their mosque, and burying-ground with the quaint Eastern tombstones. In the bazaars of Fazli Sadik may be bought yellow Turkish tobacco



by the Turkish weights of the "oka" and "dirham," as well as a variety of Turkish commodities. The proprietors sit cross-legged on the boards of their cafés; and the dogs are as lean, miserable, and persecuted as they are in Constantinople. Even little girls have their nails and finger-tips stained black by way of adornment; but, over twelve years of age, their features are rigorously concealed by the *mishmak*. There are 520 inhabitants and 128 houses, those with harems, belonging to the principal inhabitants, being surrounded by a garden or vineyard, and jealously guarded by high palings. The population generally is very poor, being chiefly dependent on the outside world for the means of living, and everything is in a shabby and dilapidated condition.

The railway from Orsova to Verciorova terminates the Temesvar and Karansebes branch of the K. K. Priv. Oestr. St. E. Gesellschaft; and at Verciorova, the frontier town of Roumania, begins the Cailia ferrata Romania, or Roumania State Railway, which leads to Bucharest. The station-master, ALFONS VON FEHEMAYR, is quite a giant, being 2 mètres (6 feet 6½ inches) high. At the Customs' barrier is a detachment of Roumanian troops, wearing their quaint one-sided shakos. A little lower down the stream is the last natural obstruction to the navigation of the Danube, which is here 1,100 mètres wide. This is the Eisener Thor, or Iron Gate, where the chain of the Eastern Carpathians crosses the river. When there is but little water the stream rushes violently through deep chasms in the rocks, parts of which rise above the surface, just as the tide used to do past the piers of old London Bridge. When there is plenty of water, however, the rocks are entirely covered; but the passage of this barrier is none the less difficult.

The first station is Turnu-Severin, made up from the Latin Turris (Trajani) Severini; and one observes painted up at the corner of a street "Strada Aurelia, Urb. Traian." Here the Oriental character is still more marked. Fruit, vegetables, and liquids are carried in earthenware pots suspended from the ends of a pole carried on the shoulders. The married women wear a long white veil or handkerchief on the head, with the ends hanging down behind; this is, in fact, the *mishmak*, though not bound closely over the features. The servant girls wear nothing but one white garment, with a kind of apron before and behind, bare feet being the rule both summer and winter, even when the snow is on the ground. The married peasant women only wear, in addition, sandals and a "zeca" or mantle. The Greek church is an imposing structure of quite Oriental type, with effective frescoes outside. The west front has two minarets, the spiral decoration on which winds in different directions. The Roumanian flag—red, blue, and yellow in horizontal bands—flies over the ruins of a palace built, in remembrance of TRAJAN, and destroyed by the Turks in 1837. It is surrounded by the Gradina Publica, or public garden, which is very rich in Roman antiquities. There are several statues, stone coffins, stone altar ornamented with low reliefs, a sandstone pillar, and a portrait in relief of TRAJAN's wife. An interesting object is an old stone well, carefully preserved, even to the iron spout, in the state it was left in by the ancient Romans.

At the usual hour of one we partake of a typical Roumanian dinner, consisting of "ciorba de potroce," a sour soup, with bits of fowl; "mitte," or sausages without a skin, which should be served on a wooden platter; "stufat de vitel cu ceapa verde," veal stew, with fresh onions; "pregitura de mere," apple roll; and Brânză Rumanesca, Roumanian sheep cheese, diluted with wine from Stirmina, the colour of sherry, sweet and rather heady, that has been two years in cask. From this bill of fare the complete Latin character of the language will be apparent; and here it may be mentioned that the currency of Roumania is assimilated to that of France, consisting of leu (francs) and bane (centimes).

After dinner we proceed, by a wood-burning locomotive with spark-arresting chimney, a little way down the line towards Bucharest to see the remains of TRAJAN's bridge over the Danube, which, tradition says, he built to satisfy a whim of his wife; but as she on first crossing chose to jump from the middle into the river, the emperor immediately had the arches demolished, leaving only the piers standing. Those on both banks, built of flat bricks and interspersed with stone, are in good preservation; and eight in the bed of the Danube may be seen when there is not much water. Near the bridge are several floating mills for grinding Indian corn, which are kept going by the current causing a kind of vane to revolve. Near

this place, also, is a Roman camp, as well as the earthworks thrown up during the war with Austria in 1848. Several Roman houses, covered up by the loose earth, were discovered while digging the foundations for the new houses, the greater portion of which have been built since 1851.

We happen to return in the same train which conveys King MILAN of Servia, who certainly did not appear to take any extra precautions on account of the recent attempt upon his life. At Orsova he is received by the courteous station-master, Herr SMODITS, and conducted through the parterres of the station into the elegant refreshment-room. Wishing to set foot upon his dominions, we cross the Danube in a remarkably long narrow boat that looks as if it was the trunk of a tree hollowed out, to Tekije (or Tekia), where we find a triumphal arch erected to receive the king. The country appears very poor, with the natural resources quite undeveloped. The roofs of most of the houses project in front. The women wear green or yellow handkerchiefs on their heads; and the men's trousers, made of thick felt, are buttoned tight in the legs. Postal communication does not appear to be much in demand, as the postmaster had to be roused from his slumbers before a post-card could be obtained; a specimen, however, would not add to the beauty of the stamp-collector's album. After taking a stroll through the village, with which we are not greatly impressed, we partake of supper, consisting of a white cheese and new red wine, still cloudy. Some of the members penetrated to Maidanbeck, in the interior, where HOLLOWAY's patent process for reducing copper ore, in an appliance resembling the BESSEMER converter for steel, is being worked by an English company.

Finally leaving Orsova, we take the train of the K. K. &c. Company before mentioned, and proceed northwards, passing Topletz, with the remains of a Roman aqueduct, and up the wild valley of the Cerna to the town of Herculesbad, at the confluence of the Mehadica with the Cerna. About three miles off are the celebrated Herculesbädern, frequented in summer by about 5,000 visitors, chiefly Servians and Roumanians. The water, strongly impregnated with both sulphur and iron, issues from the ground at a temperature of from 116° to 147° Fahr. The *curhaus* buildings and *cursaad* are imposing and admirably situated, with a background of wood and rock. Passing Mehadia, with a few Roman ruins, we reach Porta Orientalis, the highest point of the line, and soon afterwards Karansebes, the centre of an important wine-producing district. Temesvar, the seat of a Catholic and of a Servian bishopric, is next reached, containing a marble monument to its brave defenders in 1849; but the strong fortifications have now partly made way for boulevards. Passing Hatzfeld, with a large castle belonging to Count CZAKONICS, and crossing the Tisza by several imposing bridges, we arrive at Szegedin.

This was the second large city of Hungary, until about three-fourths of it were destroyed by the floods of 1879. The reason that so great damage was done is, not that the current acquired great force, but that the houses were for the most part built of unburnt bricks, which became saturated with water, and so gave way; those built of burnt bricks, which are about 12 by 5½ by 3 inches, remained. Now, however, building on a better system is going on energetically, tramways for conveying materials extending in all directions. The city still wears an uncomfortable and unfinished appearance, and this is increased by the wretched state of the streets. Their paving offers great practical difficulties, as the soil is so soft that paving-stones soon sink and become absorbed, leaving the surface as bad as ever. It is probable that a judicious system of wood-paving, with the blocks well dovetailed together, would answer; but, owing to their heavy losses, the inhabitants are very poor. A new road bridge, to be completed in August, is being erected over the river by M. G. EIFFEL, of Paris, who has constructed several other large bridges in various parts of the world. The Szegedin bridge over the Tisza is of the lattice-girder arch type, with granite and limestone piers. There are four spans, one of 110 mètres for the river, and the others of 98, 86, and 63 mètres for the flood water. The foundations of the piers for the main span are wrought-iron caissons, sunk to the blue clay and filled with concrete; and the other piers are built upon pile foundations. Granite is used in the piers up to the springing of the iron arches, and a very fine white limestone above, which produces a handsome effect.

Leaving Szegedin, we pass Keeskemet, Nagyörös with its vineyards, and then leave behind the imposing mountains that



we have skirted, and enter upon a wide plain, which extends to Buda-Pesth. At Ultö, however, the hills of Buda or Offen come in sight. Passing Köbánya or Steinbruch, where is one of DREPER'S four famous breweries, and then the Stadt-waldchen and Thiergarten of the Hungarian capital, we soon arrive at Buda-Pesth itself. Having come hither by rail, we return to Vienna by steamboat up the Danube. But, on account of the longer time required to get up the stream, it is better to reverse this proceeding, taking the river at Luir, or at Passau on the Bavarian frontier. Whichever way the trip be made, it is highly important for the tourist to "go light," as anything that cannot be carried in the hand and placed in the railway carriage net is a source of great annoyance and expense.

## THE LESSONS OF THE WOOD STREET FIRE.

[BY A CORRESPONDENT.]

THERE are many important lessons to be learnt from the calamitous conflagration in Wood Street, with regard to the spread and origin of warehouse fires, as well as some timely questioning as to the completeness of those provisions of the Metropolitan Building Acts which have for their object the subdividing of buildings. But there are also some lessons to be learnt by those who care to give attention to the more strictly architectural aspects of a City warehouse.

The constant demands for increased light and space have compelled architects to adopt a system of iron girder and column construction in lieu of the brick walls and stout beams of former times. Unfortunately, the system insures the total destruction of the building when once the fire has obtained a hold. But as clients in the majority of cases insist on this form of construction, it may perhaps be considered to have passed beyond the architect's control. This being the case, and it having become a necessity that a warehouse should be built of iron girders and columns, the architect should be prepared to meet the difficulty in the face, and by legitimate means make the skeleton of girders and columns less hideous. It would seem to be a simple matter; instead of a building of stone or brick or timber, the architect has to deal with one in iron. Iron doubtless is an extraordinary material of certain capabilities, but it meets or is supposed to meet the extraordinary wants of an extraordinary age, and architects are required with some originality and energy to cope with it, but there is no reason why it should not be treated artistically. Stone, brick, and wood have been made beautiful in order to satisfy requirements that were just as extraordinary and original some centuries ago, and bear their witness to architectural skill. But somehow or other up to the present iron girders and columns appear to have eluded the artist's grasp. Modern architects seem to be behind the times, in some things it may be for the best; but if our street architecture is, as in the past, to reflect the wants of those who live or work there, and is in any way to be a credit to the national taste, the architects, though they may disagree with the irresistible desire for change and novelty, should be able to give a character and dignity to their work in consonance with their own sense of what is fit. In too many cases our street architecture and the problem of artistic iron construction may be said to be left to men who have neither the energy nor the power to tackle the difficulty, but, with the genius of speculation builders, shirk the responsibility and so treat trabeated iron construction, with its peculiarly light forms and large open spaces, as to make one believe that the house is built of stone instead of iron, with proper pilasters, fascias, cornices, &c.

Some of the dangers and absurdities of this manner of building have been demonstrated by the recent fire. The girders, as was their nature, expanded under the immense heat and shed the sham architecture into the streets below, like so many premature figs. It was just the same last year at the premises in Cheapside: a perfect rain of stonework took place when the heat began to make itself felt, and at Wood Street the danger from falling slabs of stone dropped from the girders, which stood, was so great that the firemen and others could not remain near it, and a long length of front which should have remained standing had to be pulled down. It was most edifying to behold the exposure of the various shams and tricks by which the stone is attached to the girders, and the pilasters shaved down to the narrowest width to case iron columns; false capitals, with the pegs and wires that attached them to that which they were supposed to support; and the lintels, at the most

3 inches thick, something like the marble slips that used to do duty for mantelpieces in cheap houses.

A lesson of another kind is to be learnt from a visit to Wood Street. Standing alone in Wood Street is a good solid front of red stone and brick, with oak sashes and frames, which seem to have stood well in the midst of the flames. If this part of Messrs. Rylands' warehouses possessed no other qualities, it would be a remarkable example of the superiority of a brick and stone front. The same may be said of the warehouses in London Wall, which, though thoroughly burnt out, are standing as well as could be wished. This is fortunate, for an acknowledged artistic victory has been gained by the quaint gables and fenestration, making with Curriers' Hall a charmingly picturesque group of buildings, the work of Messrs. Belcher, on which they may be congratulated.

Let us hope that the profession will take up this matter of warehouse building, and if they must have iron girder houses, have them without sham stonework. Let some impetus be given by the architectural societies to the study of ironwork with a view to its constructional decoration, either in its casting, rolling, or painting. If architects were to exercise a little wisdom and firmness with clients we might in some instances have brick and stone fronts that are really fireproof, and without much sacrifice of window space. Under these circumstances street architecture would rise from its dubious condition, and some little relief be afforded to those whose duty it is to walk down the City.

## ROYAL INSTITUTE OF BRITISH ARCHITECTS.

AT the ordinary meeting of the Institute, held on the 18th inst., Mr. Ewan Christian, Vice-President, in the chair, Mr. A. J. Gale, the holder of the Godwin Bursary, read a paper describing his

### Tour in the United States.

Mr. Gale began by saying that he was present, at the invitation of the Council, to give some account of his tour as holder of the bursary in the first year of its existence, and in doing this he claimed the indulgence of the meeting. His tour had covered so much ground that it would be possible to refer only superficially to most of his subjects, and to treat of the architecture only from a constructional point of view. The tour had occupied three months, ten weeks being spent in America, viz. in New York, Philadelphia, Baltimore, Niagara, Detroit, Chicago, Albany, Boston, and Newport, Rhode Island. The first month and the last week previous to his return had been spent in New York. Many vast building schemes were in hand in New York. He had had an insight into the work of the New York Board of Health, which body was taking much pains to improve the tenement houses and drainage matters. The supervision of the Board also extended to apartment houses. Vast buildings let off as offices constituted one of the sights of New York, and each new block usually outstripped the last. Foremost among these was the Mills Building in Wall Street, owned by Mr. Mills. It was an enormous square block, nine storeys in height, exclusive of the cellarage or basement. The strong rooms were placed in the basement, as also on the ground and first floors. The floors were arranged in suites of offices and could be divided by partitions into holdings of any size. The offices were heated by hot air, fireplaces being also provided. The lighting throughout was good and sufficient, though some rooms had only borrowed light. At the time of his visit the building was only partially finished, but the whole of the building was already let off. There were entrances to the building from Broad Street and Exchange Place, besides the principal entrance in Wall Street. The Wall Street entrance hall, two storeys in height, was covered with a glass roof, and gave light to the basement through a well-hole. The elevators here were in full use. The height of the basement was 9 ft.; ground floor, 13 ft. 8 in.; and the storeys diminished in height from the second to the ninth, which was 10 ft. in height. The materials for the walls were bricks with red brick facings and terra cotta panelling. The general design was a combination of vertical and horizontal lines, the treatment being mainly classic. The roof was flat, constructed of rolled iron girders filled in with terra cotta bricks and covered with cement. Many of the large buildings were now constructed with this roof. The main staircase of the building was entirely of cast iron, except the treads and landings, which were of slate. The internal or partition walls were of hollow terra cotta bricks, corrugated to take plaster. Mr. G. B. Post, the architect, had kindly taken him over the building and furnished him with the copies of the plans he exhibited that evening. The drawings had been prepared and the house occupied within twelve months from the time the architect had received his instructions. It illustrated the rapidity with which building operations were carried out in the States when commercial interests required it. The heating was effected on the direct radiation



principle, a system apparently held in much favour. The coils standing in the rooms formed no inelegant feature. Mr. Gale said he had gone pretty fully into detail on the subject of apartment houses in his report to the Council, and would only mention a few characteristic features. Exorbitant rents and smallness of accommodation had led to the planning of large blocks of buildings for the middle classes, many being eight and nine storeys high, admirably constructed, and furnished with all modern conveniences and appliances. The bad state of tenement houses, or flats for the poor classes, had engaged the attention of those anxious for the improvement and better sanitation of dwellings for these classes, and a Building Act, amended in 1869 and again in 1880, had been passed in 1867. The New York Board of Health had care of the enforcement of the Act, which there was no doubt had done great good. Plans of all tenement houses had to be submitted to the Board, which took exception to all faults of construction, arrangement, deficiency of accommodation, &c. The higher class of houses in flats, known as apartment houses, were subject to the same restrictions, but in this case there was not the same temptation to overcrowding. They sometimes had large entrance halls with spacious elevators capable of holding six or eight persons, but the best arrangement was to group the suites of apartments round a small central hall or lobby. The servants' department was kept apart, and an entrance court was arranged in the basement for tradesmen's carts, &c., and this gave access to the elevators in the servants' department. It was well lighted and ventilated, and the upper side of the roof formed a carriage-way for the residents. The floors were mostly fireproof. They were constructed of iron joists, filled in with hollow arching blocks and bedded in cement. Generally the buildings were of brick with stone dressings, and had iron roofs slated. The heating was by direct radiation, open fireplaces being also provided. The boilers for heating were placed in the cellars. Some of these blocks were built by associations of intending occupiers, and the right of choice of rooms was put up for auction among them. Plumbing and house drainage came also under the supervision of the Board of Health by a law dating from 1881. Plumbers had to give in their names to the Board and submit details of proposed work. Soil pipes in New York were universally of iron, and must be coated inside and outside with hot coal tar pitch, unless enamelled interiorly. Lead compared with iron as a material was unhesitatingly condemned. The Durham House Drainage Company, adopting the principle of conveying coal gas, through wrought iron mains, with screw joints to prevent leakage, used wrought iron pipes with screw joints for soil pipes, and thus avoided leakage and settlement. The pipes would carry the water-closet apparatus without extra support from the building. Iron pipes could also be suspended from the under side of the ground floor and carried along in the basement at the top, and could be inspected for cleansing purposes, &c. The system was in use at Pullmantown, founded by Mr. Pullman, the originator of the Pullman cars. The attention paid to details in these matters was considerably in advance of what was customary in England.

In Chicago and Boston, as well as New York, ventilation had, owing to the climatic extremes, received great consideration. Two examples of well ventilated buildings in New York were the Presbyterian Church, Fifth Avenue, Mr. Carl Pfeiffer, architect, and the Madison Square Theatre, Messrs. Kimball & Wisedell, architects. The church was 200 ft. by 100 ft., and 60 ft. high, and provided sitting accommodation for 2,000. A tower 100 ft. high, 16 ft. square at base, acted as the air inlet. The air was driven by a fan 7 ft. in diameter over steam pipes or ice in the basement, as the case might be, and the admission of warm or cool air to the church could be regulated at will. The windows were all double. The building was not intended to be fireproof, but in regard of ventilation Capt. Douglas Galton had said it was the best ventilated church he had seen.

The new public buildings at Philadelphia formed one of the most interesting buildings in the States. They occupied a nearly square site, covering, with central court, four-and-a-half acres of ground. This central court also contained a range of buildings. The frontages measured 486 ft. by 470 ft. The basement storey or ground floor, 18 ft. 3 in. in height, was of fine white granite, the superstructure being entirely of white marble, from quarries at Lee, Mass. A large tower in the north front, 90 ft. square at the base, was to be carried up to a height of 535 ft., and crowned with a statue of William Penn. It would then be the highest structure in the world. Ventilation inlets with fans were provided in various towers. The roofing was worthy of note, trusses of rolled iron being used in the construction. The whole of the building had been most carefully designed by Mr. McArthur, whose plans were selected in competition in 1869. The sculpture and carved work in general were from models prepared on the spot under the superintendence of Mr. McArthur. It was estimated that the building, which was begun in January 1870, would be finished in another ten years, at a cost of ten million dollars. The Post Office, Philadelphia, a typical example of government buildings generally, had a fine granite front. The blocks of granite were cut and fitted entirely at the quarries, and put up in the building without use of hammer or chisel. Philadelphia bricks, 8 inches by 4 inches, by 2½ inches, used for the backing, had stood a crushing test of 500 lbs.

for five minutes. This, as well as all the government buildings in the States, was supervised from Washington, where architectural matters formed a branch of the Treasury Department, by Mr. J. G. Hill, under the title of supervising architect. Mr. Hill's last annual report showed many court-houses, post-offices, custom-houses, and the like, in course of erection, each under the care of a fully qualified officer. All drawings were made at Washington and copies taken by photograph. No quantities were supplied, and payment was made on the architect's certificate. The John Hopkins Hospital at Baltimore, one of the most interesting buildings of the kind in the world, was the result of the study by Dr. Billings, of the National Board of Health, of the chief European hospitals, and under his authority all the sanitary improvements adopted had been introduced. Each ward was isolated from the other wards and from its own service rooms. All the wards had the same aspect, the windows facing east and west. Hot water on the low-pressure system was employed as the heating agent. The materials generally were of brick. Messrs. Cabot and Chandler, of Boston, were the architects, and Mr. Niersee, of Baltimore, was consulting architect. At Detroit Mr. Gale said that iron fronts were much used for buildings, and he mentioned that Mr. Gordon Lloyd, nephew of the chairman, approved of them. Among the advantages claimed for iron fronts they were said to be more water-tight, more durable and cleaner than stone or brick fronts, and less expensive. The sashes were of wood and the cornices of galvanised iron, the foundations being of brick. Since the sad experiences of Chicago and Boston every improvement in fireproof construction was eagerly sought after, and one of the great elements of safety was considered to be found in iron construction. Mr. Gale concluded with references to his observations at Albany, Boston, and Newport, and in allusion to artistic matters said there was much to be found which was worthy of a place alongside English work.

The CHAIRMAN said that Mr. Gale had evidently proved himself a worthy holder of the bursary. In listening to the description of such gigantic buildings, he had felt as if he were an inhabitant of Lilliput. Professor Cockerell, he believed, was often in the habit of referring to the description of the building of Solomon's temple, and he was himself reminded of it by hearing of the enormous and costly masses of stone employed, and still further by the description of the preparation of the stone at the quarries, after which, as in the case of Solomon's temple, it had only to be brought to the site and placed in position.

Mr. J. SLATER said that he had never been in America, but it seemed to him to be the place where many practical suggestions could be obtained. He could imagine no better training for an architect, after having studied art and archaeology in Europe, than a visit to the States. The marvellous ingenuity of the Americans, as seen in their mechanical contrivances, &c., would, he thought, prove catching. On some works in the neighbourhood of London he had had a foreman who had been in Chicago; this man was extremely fertile in resources, a thing they often looked for in vain among builders and builders' men. These latter were mostly too conservative, and, working by rule of thumb, had little idea of the principles which underlied building construction. Architects, too, he thought, were rather in danger of getting into a groove, and anything that would lift them out of the groove was an advantage. He anticipated great good would result from the establishment of the bursary. They would find that everything English was not always the best, and this even in an artistic matters, for though they had heard much talk of a Victorian style, its prospects had not hitherto been promising. Two notable features of American enterprise had regard to economy of labour and utilisation of waste products. In a new country, where labour was scarce and costly, they had necessarily been driven to devise all manner of ways of saving or doing without manual and other labour. There was scarcely a town of 6,000 inhabitants but had its telephone, which alone saved a wonderful amount of labour. He had lately read of an American firm who had found a way of condensing charcoal smoke, which before was allowed to pass into the air in large quantities. By condensation, acetate of lime and tar were extracted. It had nothing to do with building, but it showed that a great amount of impurity could be prevented passing into the atmosphere. Mr. Slater referred to an American pamphlet on rural school building. The subject was treated in a most exhaustive way, and yet was so simple and concise that anyone could understand it—strikingly different from the extraordinary instructions issued here by the Education Department. So much value had been attached to the pamphlet, which was published in September 1880, that further publications in connection with the building of higher schools, academies, &c., were proposed. In conclusion, Mr. Slater moved a vote of thanks to Mr. Gale for his paper.

Mr. H. MACLACHLAN, who seconded the vote of thanks, observed that the old buildings of England—abbeys, and so forth—were typical buildings in regard of keeping out changes of heat and cold. An iron shell construction would be very bad for keeping out cold or heat. In regard to the fireproof construction, there was a danger that rust would be able to attack the iron, and one could not get at it to hinder the evil by painting, &c.

Mr. A. T. TAYLOR said he had just come from America and



Canada, and, having gone over much the same ground as Mr. Gale, he could endorse what that gentleman had said. He considered that American architects could no longer be looked on with contempt, for wonderful progress had been made in artistic matters. Great progress was noticeable in private residences, and much was to be met with that would be hard to match in London. The Americans thought nothing of spending fifty or sixty thousand dollars in finishing off a few rooms. On the matter of cast-iron construction he had been disappointed that no special treatment for the material seemed to have been attempted, the lines of a stone building being merely reproduced in iron. The immense height of houses in New York required elevators, and every small block had one, a feature that might well be introduced in London. In consequence of this convenient mode of access to all parts of the building, the rents in the upper part were nearly as high as down below, and there was no difficulty in finding applicants for the upper offices. In regard to the Philadelphia building, it was doubtful if the tower would ever be carried out, but the building showed an immense improvement over anything else he had seen in America. The Treasury buildings at Washington, which were being carried out by the Government, struck him as insipid. The building of it was conducted from headquarters, and that no doubt was the solution. Great ingenuity in planning seemed to be exercised in New York, where land was expensive.

Mr. P. GORDON SMITH considered that plumbing and drainage would be better carried out in London if subjected to one central authority, such as the Metropolitan Board of Works.

The CHAIRMAN said that, unlike Mr. Slater, he had had the advantage of visiting America, and that nothing impressed him so much as the go-aheadness of the people there in every respect. News of an invention, as soon as brought out, was flashed from one end of the States to the other; and if there was anything good in it it was used, and used till it was superseded by something superior. Anything in the shape of an improvement was adopted at once without waiting for some better to be invented. The Chairman instanced the great convenience of the telephone by saying that the lady of the house where he made a stay while in Detroit never had occasion to leave the house to give orders to the tradesmen, as it was all done through the telephone. He had attended a service in the church in Fifth Avenue, New York, described by Mr. Gale, and it certainly was the perfection of luxury—in fact, the one great quarrel he had was that the churches there were too luxurious. The freshness of the air was altogether remarkable, and, while nothing set him dozing so soon as stuffy air, he had quite enjoyed the sermon, and thus he could testify to the practical results of the ventilation in the church. For sound and hearing the building was perfect. As for accommodation, according to his calculation, it would hold 3,000 persons; at any rate, in England 3,000 would be put into it. He was sorry to hear that, architecturally speaking, his nephew had become such a heretic as to adopt iron fronts; this was, however, since his visit to America, or he should have been tempted to scold him. The great store of the late Mr. Stewart, one of the largest in the world, had been entirely constructed of iron, and a terribly bald-looking building it was. If in this country we did not know how to provide against changes, the Americans did, and all their houses were constructed so as to be comfortable in the very coldest weather. A merchant's house which he visited was most comfortable in this respect, the temperature in the house being kept all through the winter at from 65 degs. to 70 degs., no matter how low the thermometer might fall. Steam was used as the heating agent. Walls of houses were, indeed, so constructed that they never suffered from the changes of temperature as we in this part of the world did. The Chairman then put the vote of thanks to the meeting.

Mr. GALE, in reply, said the architectural detail of the iron fronts seemed to be of two sorts. Mr. Stewart's store was, he thought, an attempt to combine in construction columns of Classic detail with elliptic arches, and the result, besides being inharmonious, was as bad as it could be. This he had noticed in all iron buildings in New York and in other American cities also. If he might put in a plea for Mr. Gordon Lloyd, he would say that in his buildings there was certainly no attempt to trifle with architectural features in that way. The second kind he could hardly describe, except by saying that it was a combination of vertical and horizontal lines treated in a manner more suitable for iron construction. Among the drawings on the walls would be found the plans of some school buildings at Baltimore; time, however, had not allowed of introducing that and many other interesting matters. In regard to the iron shell construction, alluded to by Mr. MacLachlan, the air spaces in the fronts, constructed according to one system, gave a great immunity to the building in regard of changes of temperature, and the heating could be easily effected. The extremes of heat and cold suffered certainly made some havoc with the joints, but as far as he could see in Detroit the difficulty was obviated by well lapping the joints, more especially in the solid mode of constructing fronts. Iron columns and girders were practically hermetically sealed, and no rust could get in. Otherwise it would be useless as a fireproof casing for iron, as where air had access fire also would get in.

## THE FRESCOES AT THE MANCHESTER TOWN HALL.

THE remarkable series of scenes from the history of Manchester which Mr. Ford Madox Brown is depicting in the banquetting-room of the Town Hall of that city is, says a writer in the *Times*, progressing rapidly, five of the twelve available spaces having already been filled up. The energy and artistic spirit of the Manchester Town Council in giving encouragement to historic painting of a high class cannot be sufficiently commended, and might serve as an example to other municipal bodies and building committees. That so noble a specimen of modern architecture as the new Law Courts should be devoid of all adequate pictorial adornment is an anomaly which it would be difficult to match in any country but England. In Mr. Madox Brown the Manchester Town Council have found an artist fully equal to his difficult and varied task, and by the time the entire series is finished the magnificent banquetting-hall will present a rare instance of continuous historical illustration and harmonious pictorial design. Thus much may be safely predicted from the five elaborate pictures already finished, the last of which will shortly be displayed to public view. Before entering upon the subjects of the various designs, it will be necessary to say a few words of the process of wall-painting employed by the artist. Its invention seems to have been almost simultaneous in France and England. For Hippolyte Flandrin, the great religious painter, and other French artists appear to employ very much the same medium which Mr. Gambier Parry, quite independently of them, used for his decoration of Ely Cathedral, and which Sir Frederick Leighton adopted from him in his mural paintings at Lyndhurst Church in the New Forest, and more recently at the South Kensington Museum. The object of the process is to secure wall-pictures from the ravages of time to which frescoes proper (like those in the Houses of Parliament) are specially liable in our moist climate. The chief ingredients of the medium used are wax, gum elemi, and copal varnish mixed with spike oil. The painting is done on the dry wall previously prepared with the materials already mentioned, and to secure the perfect absorption of those materials Mr. Madox Brown has exposed the surface to intense heat, following in this the example of Delaroche in his famous *Hemicycle* at the Ecole des Beaux Arts. The result at Manchester is a depth and luminousness of colour equal to the most powerful oil-painting.

What strikes one first on looking at Mr. Madox Brown's pictures is their historical character in the best and strictest sense of the word. The subject in each case is locally and chronologically defined by purely pictorial means, and the motive of the action impresses the spectator with the vividness almost of uttered speech. At the same time there is that breadth and simplicity of treatment which must always distinguish genuine historic work from *genre*, however pretentiously disguised. Mr. Brown's characters, in brief, are not modern people dressed up in fancy costumes, but genuine types of their period as transmitted by the art of that period. It is, perhaps, this strict adherence to the historical type which makes M. Chesneau, in a long and elaborate criticism of the artist's work, conjecture that he actually tries to imitate the pictorial style of the period to which his subject happens to belong. This, of course, is going too far. Mr. Brown, in spite of his eager search for local colour, always remains a modern painter in full possession of the subtleties and intellectual resources of modern art, and the treatment of his subjects, from whatever period they may be taken, shows the common impress of a marked individuality. Fortunately, the artist has not thought historic dignity incompatible with the elements of beauty and even of homely sentiment. It is a curious fact that none of the five designs already executed is without children; in none also is there wanting a female type of elevated conception. The artist must be congratulated upon this fact. A picture without a woman is as intolerable as an opera without a soprano; and, setting aside battle-pieces, there is, among the great works of art which have taken real hold of men's minds, perhaps one only which, from the nature of its subject, labours under the defect above referred to. But even in that one—we are speaking of Leonardo's *Last Supper*—the artist has felt, and to some extent supplied, the want of what Goethe calls the "Erdig Weibliche," by imparting to the features of the Disciple whom Jesus loved almost feminine softness. To make womanhood and beauty essential ingredients of the history of Manchester was a task which might well have puzzled a less ingenious and versatile artist than Mr. Brown.

The subject of the first fresco is the building of the fortified camp of Mancunium by the Romans. The central group consists of the Roman General—possibly Agricola, the Governor of Britain, himself—and a centurion, who presents to his chief the plan of the camp, drawn on parchment, pointing out how the work is progressing. A standard-bearer, grasping the silken, wind-inflated Dragon standard, completes the martial trio. Close to them and holding her little boy by the hand stands the General's wife, an imposing beauty, with hair died bright yellow and eyebrows left dark, after the fashion of Imperial Rome. All around the central group the building work is going forward; large blocks of stone and heavy loads of cement are carried by the Britons and adjusted in



their places by the legionaries, told off as masons for the occasion. The river Medlock and vast oak forests red with the last autumn leaves fill up the background. A striking feature of the picture is the contrast of type between the hardy Britons and their conquerors whose bronzed complexion and dark hair betoken the natives of a southern country unused to the inclemencies of British skies. That feeling is even more forcibly indicated by the General's lady, who, in spite of her furs, stands shivering in the chill winds of November. The idea of the Roman conqueror triumphing over all difficulties could not have been expressed by more realistic and at the same time strictly pictorial means.

The next design takes us from the England of the Romans to that of the Heptarchy, and represents the second powerful element in the history of civilisation—the introduction of Christianity. Edwin, King of Northumbria and Deira, the Venerable Bede relates, was baptised A.D. 627 at York, and the next day 11,000 of his subjects followed his example. His wife, Ethelberga, the daughter of the Christian King of Kent, was, in this as in so many cases, the cause of her husband's conversion, and to her and the great Bishop Paulinus an important place is accordingly assigned in Mr. Brown's picture of Edwin's baptism. It may be objected that the subject of that picture has no immediate reference to the history of Manchester. But the artist refuses to look upon his task in a merely local point of view, and considers himself justified by the fact that Manchester was part of Edwin's dominion, and, therefore, was immediately interested in the king's momentous act. The scene of the picture is laid in a wooden church, the tessellated pavement of which, drawn in careful perspective, shows that it has been erected on the site of a Roman temple. To the left of the picture is the fount in which the king—a fair Saxon—is kneeling while a monk pours the consecrated water over him, Bishop Paulinus—a typical Italian priest—blessing the new convert with his extended right hand, and a cloud of smoke rises from the censers swung by youthful choristers. The foreground opposite is occupied by the Queen, who with pious awe watches the sacred act, and holds by the hand a pretty little girl, the daughter of the king, it may be presumed. The background is occupied by a crowd of soldiers and people whose faces indicate the various impressions with which they regard the ceremony. Again the historic significance of the event is forcibly brought home to the spectator by the general design, no less than by such accessories and facial characteristics as have already been pointed out.

The composition next in chronological order is the most dramatic, and at the same time the most elaborate of the series. The subject is the expulsion of the Danes from Manchester, and an adequate analysis of its many interesting features would far exceed the limits of our space. It must be sufficient to borrow the substance of the description which the artist has supplied for this, as for all of his pictures: The scene, it should be understood, represents the narrow winding street of a wood-built city. A young wounded Danish chieftain, the wearer of many bracelets, is being borne past on a hastily constructed stretcher, his companions endeavouring to protect him and themselves with their uplifted shields from the townsfolk's missiles. In front of this group four men have fallen confusedly one over another on the ground. From a house which faces this scene a young woman has thrown a tile which strikes down the Raven standard-bearer. An aged inmate from the same window throws a spear, the national weapon of the Saxons, while two little boys gleefully empty a small tub of boiling water over the fugitives. One of the most striking features of this powerful composition is a young Dane just on the point of emerging from the rampart gate with the open country beyond, and shaking his sword at his pursuers as much as to say, "Wait till we come back and take our revenge!" The next composition to which we come, scarcely less elaborate than that just referred to, differs from it in spirit as widely as can be imagined. It refers to the establishment of Flemish weavers in Manchester, under the auspices of Philippa of Hainault, Queen of Edward III., an event to which the vast development of textile manufacture in Lancashire is traced. The picture represents a visit paid by the Queen to her humble *protégés* who gather round her richly caparisoned palfrey to display to her the result of their labours, consisting of a fine piece of "Lincoln green" cloth, similar to that worn by the Royal lady herself. Again the chief event is depicted with graphic boldness, and again much careful work and significant byplay is exhibited in the minor figures, among whom a charming row of school children, kneeling on and near the steps of the market cross, is specially worthy of mention. The painting in this work is less powerful than in some of the other compositions, although some fine effects betray the hand of the experienced colourist.

None indeed but a colourist of the first order could have painted the fifth picture of the series, and the last as far as at present finished. The pictorial motive here is a light effect of the most difficult kind. The subject is of more than common interest at the present moment. For the scene is laid in the darkened chamber of William Crabtree, the clothier, of Broughton, near Manchester, who like his friend Horrox, the curate of Hoole, watched the transit of Venus on the 24th of November, 1639. The only light in the picture proceeds from a bright ray of the sun let into the room through a telescope and thrown on a flat surface, which distinctly shows the sun's disc with the planet in the shape of a dark spot on

it. Thence the light is reflected on to the face of the astronomer, who gazes on the long-expected phenomenon with a rapture as intense as it is pathetic. The poetic motive, as distinct from the pictorial motive above alluded to, lies in the contrast between Crabtree's scientific enthusiasm, and the commonplace emblems of his trade which surround him on every side. The room is evidently a kind of garret above the shop, which is seen below through an open trapdoor. The shelves are filled with parcels of goods, filed bills, and other business paraphernalia, and on the floor lies a piece of matting addressed to "Master Will Crabtree, Drapier, Broughton." Moreover, from the pocket of his dressing-gown is dropping a tape-measure, which, however, the astronomer regards no more than the chair which in his excitement he has upset. The real and ideal, it will be seen, are here placed in close juxtaposition. The element of beauty is represented by Mrs. Crabtree, a fair young matron, holding a baby in her arms and restraining with difficulty a little boy from disturbing his father. A long piece of knitting, at which Mrs. Crabtree is at work, is skilfully used as a connecting line between the two chief components of the picture. We have little doubt that when the work is shown to the public many will agree with us in assigning to it the first prize among the series for concentrated unity of design and masterly execution.

A final remark suggests itself. Mr. Madox Brown, from his friendship with Rossetti, who, in a manner, was his pupil, is frequently connected with the Pre-Raphaelite movement. But there is in these pictures less "elective affinity" with anything produced by that school than with Maclise's and Dyce's monumental and too much neglected frescoes at Westminster—as far at least as genuine historic treatment is concerned.

### FIRES IN MANSIONS.

THE directors of the Law Fire Insurance Society, viewing the severe fires which have lately occurred in mansions and private houses, request the attention of their customers to what appear to be the most frequent causes of these fires:—Timber built into or near fireplaces and flues. Hot-air apparatus of every description. Stoves introduced into rooms previously unprovided with them, without professional advice. Workmen allowed to carry out repairs and alterations without proper superintendence; fires being lit without fenders or guards, and candles used without candlesticks. Plumbers lighting fires upon the roof to melt their lead have caused the destruction of many noble mansions. Fires lit in grates not previously used, or disused for a long period, the flues not having been first examined. Chimneys not being thoroughly swept. This should be done at fixed periods, and especially before the return of the family after a long absence. Gas within the house; danger may be avoided if the service pipes are provided with taps, so that the gas may be turned off at night by some person specially appointed to that duty from those rooms where it is known to be not required. Mineral oil lamps are a fertile cause of fire, and demand the greatest caution in their use. Such lamps should have a heavy, flat base to prevent their being easily upset. The oil should always be stored outside the dwelling-house. Lucifer matches have caused immense loss of property and of life. Lying about the house they are trodden upon, and by this and other means ignited. Only matches which can be ignited by friction upon the box should be permitted. Clothes hanging before the fire. Overheated flues. Wood left on the kitchen range to dry for lighting fires in the morning. Reading in bed. These and similar acts of carelessness and causes of mischief can only be guarded against by an inspection of the house by a trustworthy person after the family have retired to rest. It is necessary to give immediate notice of the intention to introduce these or similar additional risks. The fire office will then give advice as to the precautions required to avert danger. It cannot be too strongly impressed upon the inmates of mansions, and indeed of all dwelling-houses, that in case of fire each person should immediately run for water, and continue to fetch it by any means, so long as there is hope of arresting the flames; but at the same time all doors and windows must be closely shut. When water is not available, a fire may be extinguished with rugs, carpets, blankets, or other such materials. When all hope of stopping the fire is at an end, excluding the air must be relied on. A fire may thus be confined to one room, giving time for the arrival of the engines.

An International Exhibition will be held in Calcutta next December. There will be nine principal sections:—1, fine arts; 2, apparatus and application of the liberal arts; 3, furniture and objects used in dwellings; 4, clothing, including fabrics; 5, products of mining industry, forestry, &c.; 6, apparatus and processes in the common arts; 7, food; 8, artisans' workmanship; and 9, children's work. There may also be a loan collection of paintings, sculpture, and works of art generally. The usual gold, silver, and bronze medals will be awarded by special juries of experts. The exhibition will be opened on December 4, 1883, and will close on February 29, 1884.



## NOTES AND COMMENTS.

A GOOD anecdote was repeated by Mr. MUNDELLA, when addressing the art students of Leicester a few evenings since. It happens that Professor ROSCOE, when visiting one of the public schools for teaching science and art in Rouen, asked to see the museum. When he was brought to the gallery he was surprised to see in a glass case in the middle a spiked German helmet or pickelhaube. Pointing it out to the director he asked if that could be called an object for scientific teaching. "Oh, yes," was the reply, "that plays a very important part in the machinery of teaching in this school. When my students seem to relax their industry, when I find them indifferent, when I cannot get them to work as I know and feel they ought to work, I reach down the 'pickelhaube,' and say to them: 'Gentlemen, do you know how that helmet came to Rouen? Do you know that the men who wore those helmets conquered France and held Rouen twelve months in subjection, because they had more cultivated brains than we have?'" Mr. MUNDELLA considered that a moral might be drawn from this story. We may not be afraid of military invasion, but we have something to fear from the cultivated brains of foreigners.

MESSRS. PICART & LAPEYRE, the contractors for the demolition of the Tuileries, have commenced the erection of a hoarding round the ruins. Within the enclosure a space is set apart for the reception of those fragments of the building that have been reserved to the State by reason of their artistic value. In addition to the parts specified beforehand, which amount to 700 cubic mètres, the Government further claims the right of pre-emption of any other fragments discovered in the process of removal that may appear worthy of preservation. M. PICART has received the following characteristic letter, purporting to have been sent by Mdlle. LOUISE MICHEL:—"Citoyen,—I wish to propose to you, in the name of a group of Anarchists, to effect unpaid the removal of the remains of the former den of tyrants. We undertake to have it finished by July 14, the anniversary of the taking of the Bastille by the noble people of Paris. Our brother demolishers of Montceau-les-Mines send you their cordial compliments." M. GARNIER, the superintending architect of the demolition works, has received several letters, including one from the son of the Dutch watch-maker, NAUNDORF, who passed himself off as the Dauphin, son of LOUIS XVI., informing him of the existence of a treasure rumoured to have been concealed in the cellars at the time of the Revolution.

It is announced that works of art sent to Munich for the forthcoming International Exhibition of Fine Arts ought to arrive there between the 1st and 31st of May, and the Committee decline all responsibility for those reaching Munich before the former date. They reserve to a later date their definitive decision respecting the admission of works exhibited in the Paris Salon of 1883.

A PROTEST, signed by a large number of the most eminent French artists, has been addressed to M. LOGEROTTE, the Under Secretary of State, charged with the direction of the Fine Arts Department, against the proposed triennial and retrospective exhibition which the Government is supposed to entertain the idea of organising for the coming year. The petitioners pray that the annual salon, now held under the management of the Society of French Artists, may not be subjected to the rivalry of another exhibition, which, under direct official auspices, could not fail to prejudice both its artistic and financial success. They propose as an alternative to the Government project, a decennial exhibition, organised on a grand international and retrospective basis, which would be eagerly welcomed by artists and the public all over Europe.

THE Roman Congregation of Propaganda are desirous to collect objects which may throw light upon the history, art, morals, and customs of various nations. To allow space for exhibition the Borgia Museum, which was founded in the early part of the century, has been removed to more extensive premises in another part of the Urban College.

WHILE engaged in cleaning out and deepening one of the basements beneath the Salle des Cariatides at the Louvre, the workmen discovered a subterranean room or gallery, which is evidently of very ancient construction. It was found to contain two skeletons and many sculptural fragments; and after a careful examination and reference to the plans of the palace, the architects of the building have come to the conclusion that it formed part of the old Louvre of PHILIP AUGUSTUS, built during the twelfth and thirteenth centuries. This prince, although he did not lay the foundations of the original building, completed and fortified it, constructing within the walls the famous tower or keep, which measured 144 feet round, 98 feet high, with walls 13 feet thick at the base, and 12 feet at the top. Of this tower not a vestige now exists. A staircase is being made to permit the public to descend and inspect the curious room just discovered.

THE Prefect of the Seine and the members of the Council of Architecture this week paid a visit of inspection to the Hôtel de Ville, Paris. The interior work is being pushed on with all possible activity, but that still remaining to be done amounts to upwards of 4,000,000 francs, and cannot be finished at the earliest under six months. MM. BALLUE & DE PERTHES, the architects, have, however, undertaken to hand over the building absolutely complete both within and without before the end of June next. Possession may therefore be taken on July 1, and the new Hôtel de Ville officially opened on the 14th of the same month, the national fête day.

THE BELT libel case has at length exhausted itself, and the plaintiff has been rewarded by a verdict in his favour, and his damages have been estimated by the jury at the enormous sum of 5,000*l*. A new trial will probably be applied for without delay by the defendant, and there are sufficient grounds to warrant the application. The case has given rise to much diversity of opinion. The position of the plaintiff—who to some minds appeared to be fighting single-handed against a host of envious rivals, backed by the influence of the Royal Academy—was one that was likely to excite sympathy. The allegation of forgery, which could not be upheld, was also in favour of the plaintiff. And besides, many of the witnesses who appeared in support of his case were of that class which most impresses a jury. On the other hand, weak points were appearing every day in the evidence for the defendant. The jury knew little about sculpture, but it was not difficult for them to suppose that a similar charge had been made in connection with their own businesses. How few London shopkeepers can be said to be the makers of the things which they claim as their own? If they put themselves in the plaintiff's place the case would assume a new aspect, and it is not unlikely this was done. But if it were possible to have, say twelve French sculptors in the box, would the result be the same?

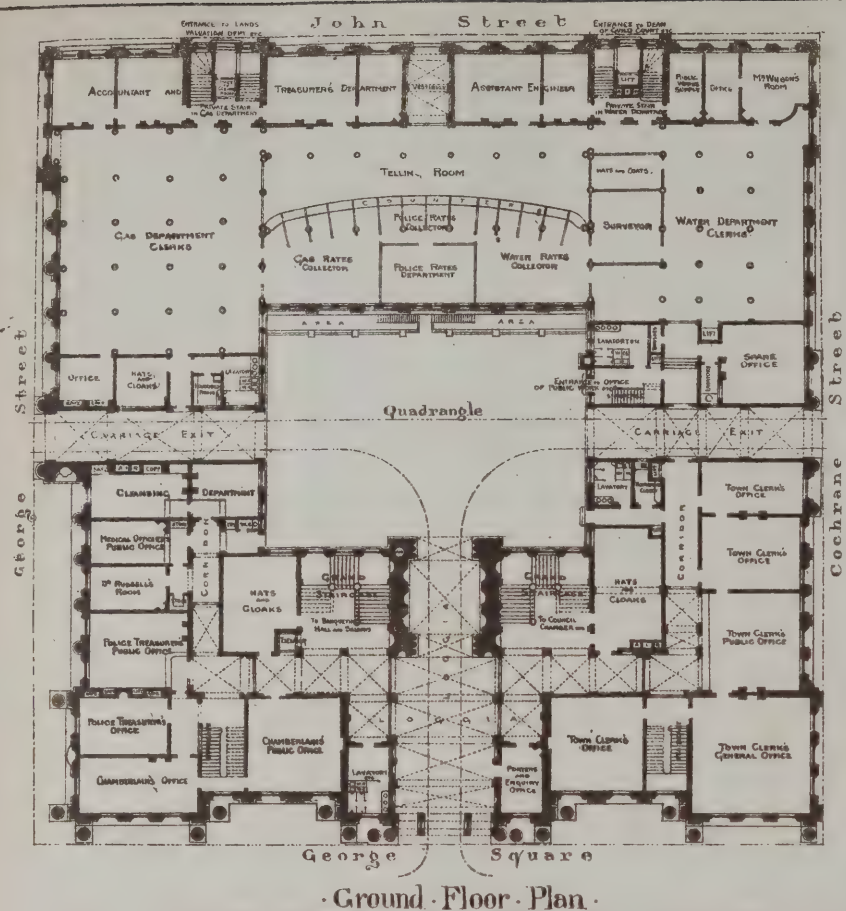
To anyone who is familiar with the ordinary exhibitions of the Royal Scottish Academy the appearance of the galleries at the present time must be a surprise. Year after year no more than a few drawings of buildings are admitted, and they are always hung in positions which secure them from notice. Now about 1,200 architectural drawings fill the rooms, and the only paintings to be seen are portraits of architects. So remarkable a transformation does credit to the diplomatic powers of the Edinburgh Association. The works exhibited form a variety of classes. There are two paintings by CANALETTI, drawings in Greece, sketches by GEORGE and TOM KEMP, the original plan for laying out the new town of Edinburgh, and many views of the old town before the alterations. Modern work is well represented, and it is satisfactory to find that numerous English architects have responded to the applications for drawings.

DURING the course of next year the Académie des Beaux Arts has to award the Prix Chaudesaignes, consisting of 2,000 francs a year for two years, placed at the disposal of a young architect for the purpose of enabling him to visit Italy for that period and complete his studies there. Since its foundation three architects have benefited by it—MM. BENOUVILLE DEFOYE, and MASQUERAY.





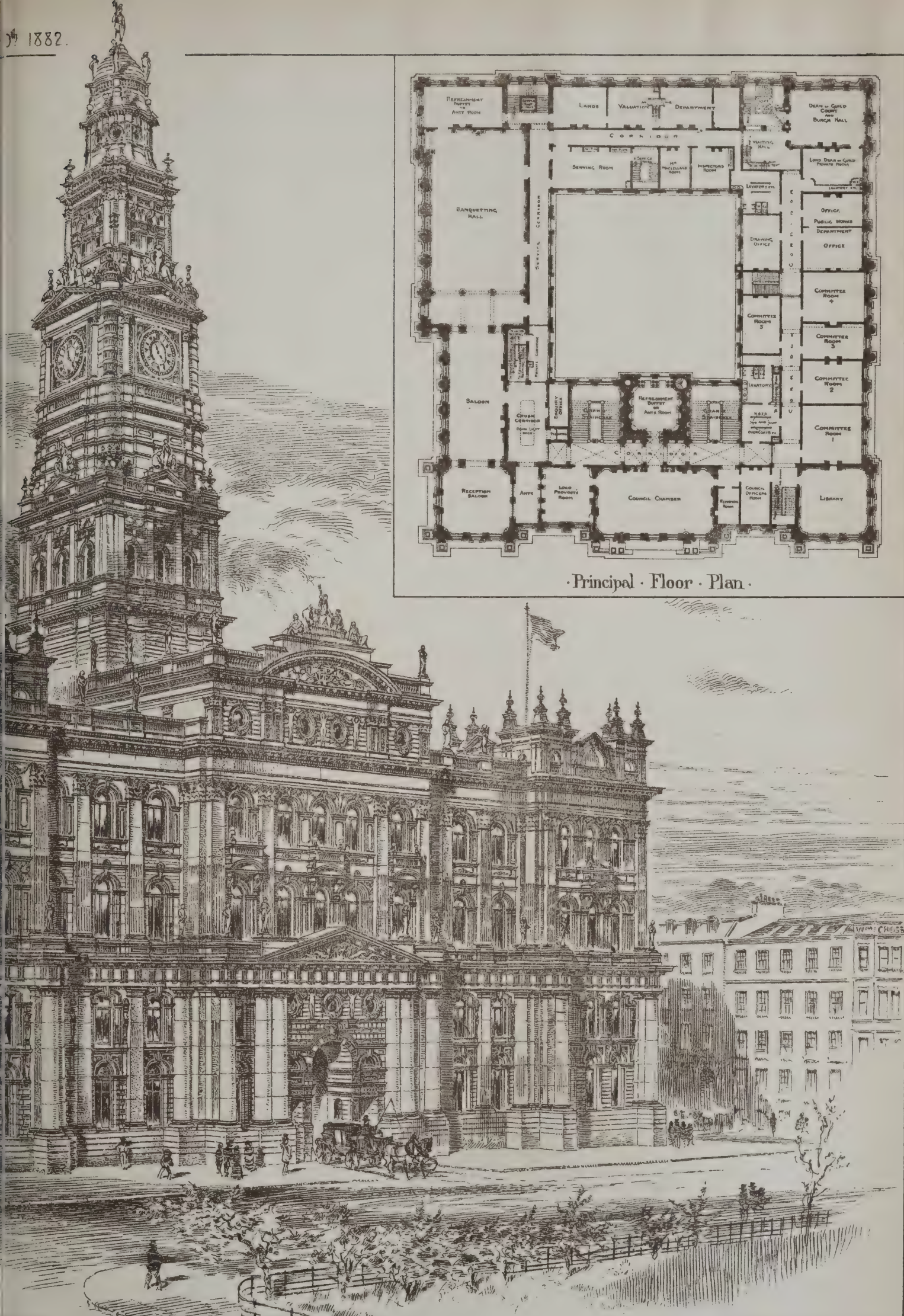




## DESIGN FOR THE GLASS

BY MESS<sup>RS</sup> LEEMING





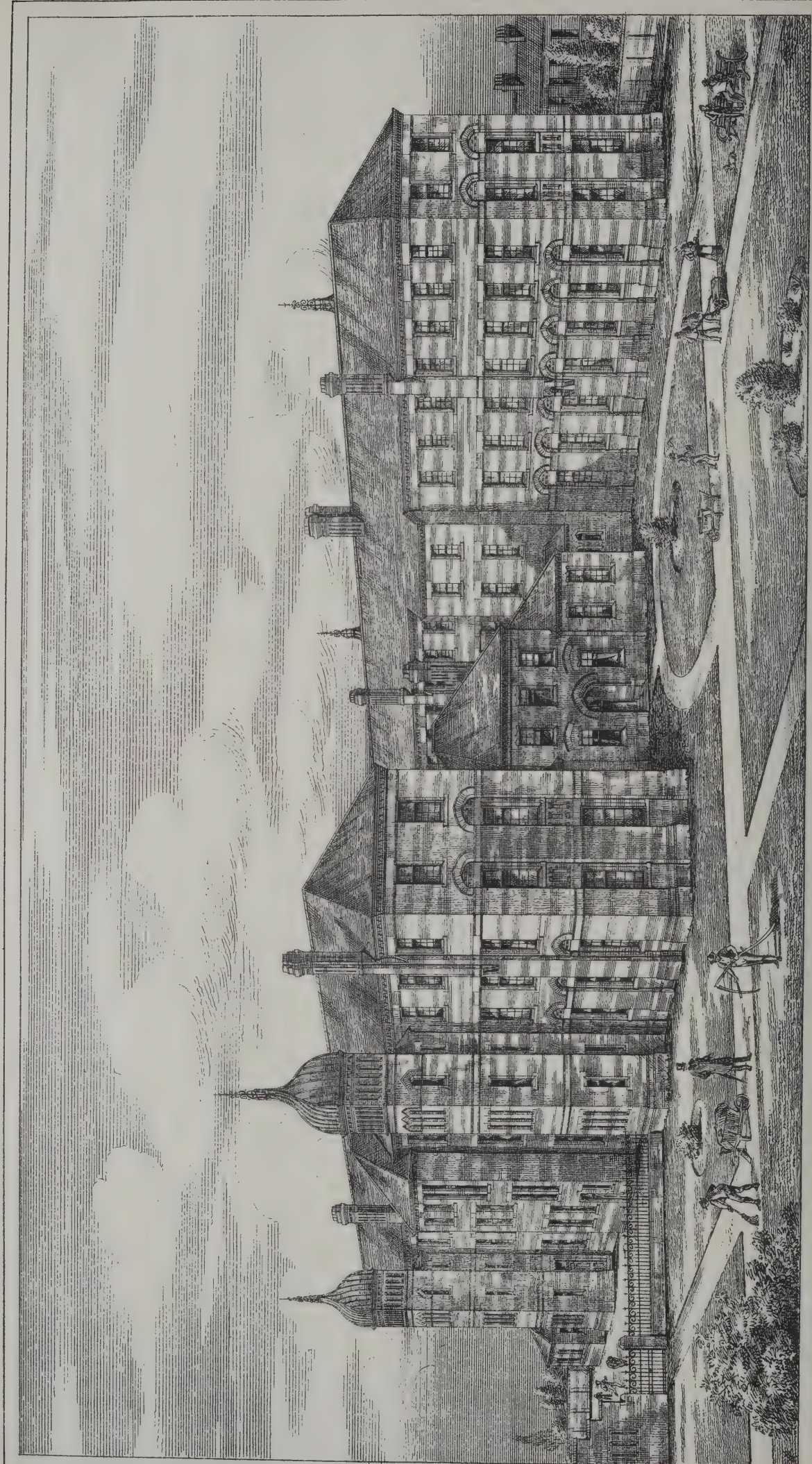












SCULCOATES UNION WORKHOUSE, HULL.  
NEW CHILDREN'S BUILDINGS.

SAM<sup>l</sup> MUSGRAVE, ARIBA.  
ARCHITECT, HULL.



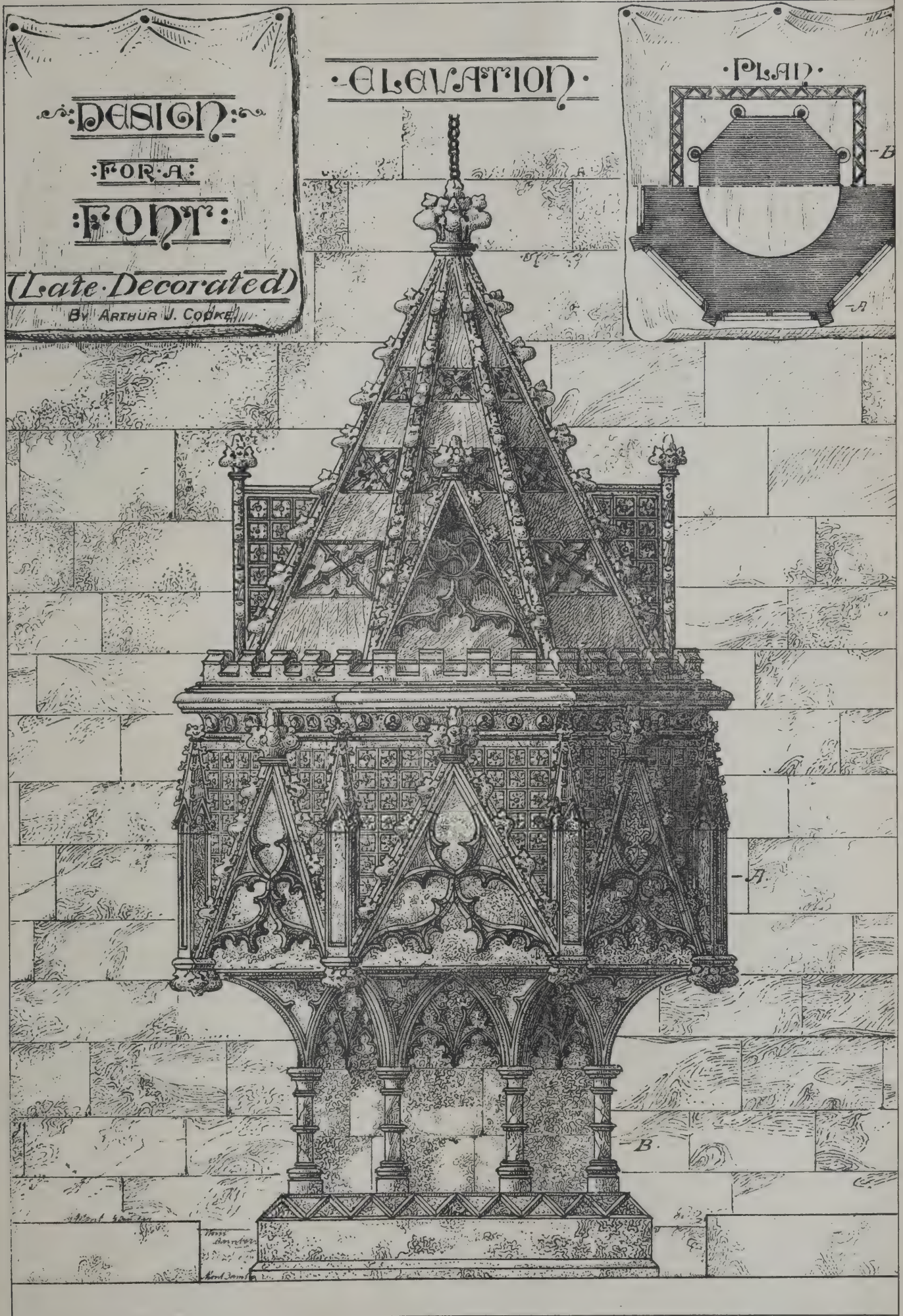






Twitchen House, North Devon.  
EDWARD BURGESS, ARCHT.

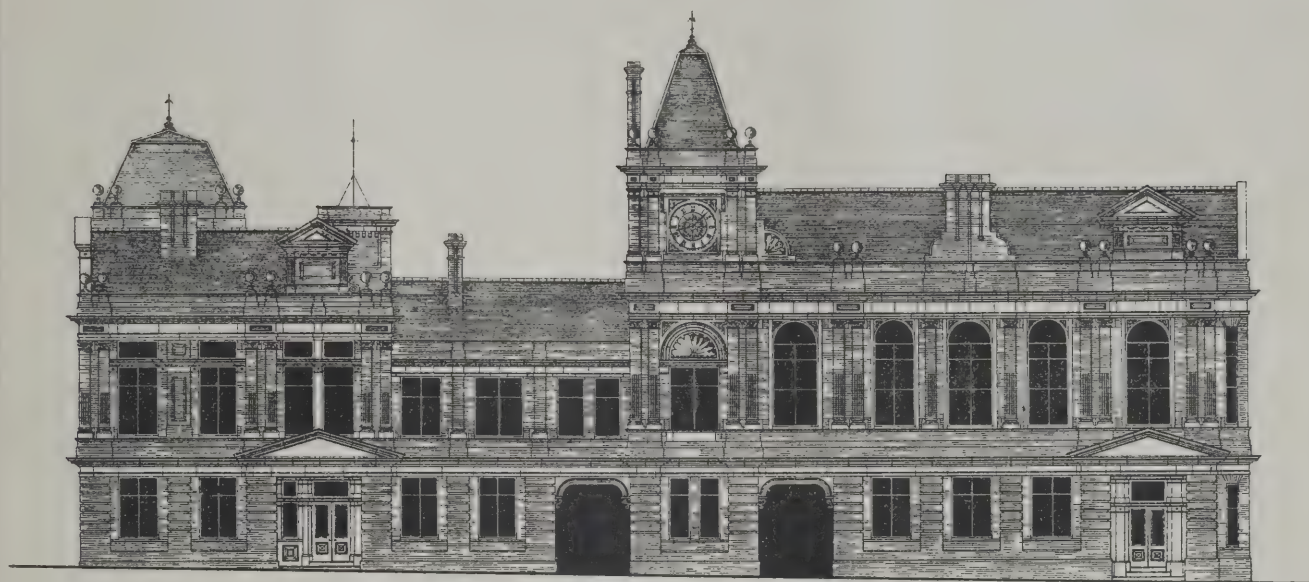












ELEVATION TOWARDS NEW STREET.



ELEVATION  
COMMERCIAL STREET.

ELEVATION  
AUSTIN FRIARS.

DESIGN FOR THE MUNICIPAL BUILDINGS, NEWPORT.

BY REGINALD BEESLEY, ARCHITECT.







## ILLUSTRATIONS.

## DESIGN FOR GLASGOW MUNICIPAL BUILDINGS.

THE design illustrated is one of the ten premiated in the late competition, and shows the perspective view submitted in the final list, together with the plans of the two principal floors. In choosing a massive and monumental version of classic, the authors sought to produce a design worthy of one of the finest sites in Europe, surrounded as it is by architecture of no common order. The Merchants' Buildings, on the opposite side of the square, seemed to challenge a rival, which was attempted to be produced in the present design. The plans follow, in many respects, on the lines laid down by Mr. CARRICK, the City Architect, especially in the location of the several departments. A complete system of heating, ventilation, and sanitary arrangements, devised entirely by the architects, accompanied this set of drawings. Messrs. LEEMING & LEEMING, architects, of Northgate Chambers, Halifax, are the authors of the design.

## TWITCHEN HOUSE, NORTH DEVON.

THE illustration of Twitchen House is a reproduction by the ink photo process from a water-colour drawing which was exhibited at the Royal Academy. The architect is Mr. E. BURGESS.

## DESIGN FOR A FONT.

THIS design is also a reproduction from a drawing by Mr. ARTHUR J. COOKE, exhibited in this year's exhibition of the Royal Academy. The font is intended to be built of Caen stone, with the diaper ornament to bowl of red Dumfries. The small shafts to base to be of red Devonshire marble.

SCULCOATES UNION WORKHOUSE, HULL.  
CHILDREN'S BUILDING.

THIS building, now fast approaching completion, has been erected by the Board of Guardians of the Sculcoates Union, Hull, for the purpose of accommodating the pauper children away from "the house."

It is situated at the rear of the workhouse proper, and is approached by a separate entrance from Hilda Street at right angles to the Beverley Road, Hull. It is intended to accommodate upwards of 300 children, and consists of two blocks, each containing school and day rooms on the ground floor, and having dormitories on the first and second floors respectively. The central portion of the building consists of rooms for the schoolmasters, mistresses, and matron, and also embraces the whole of the administrative department. The building is of plain red brickwork throughout, all attempt at architectural treatment being rigorously eschewed in order to keep the cost down to the most economical point.

The architect employed by the Guardians was Mr. SAMUEL MUSGRAVE, A.R.I.B.A., 18 Trinity House Lane, Hull.

## DESIGN FOR MUNICIPAL BUILDINGS, NEWPORT, MONMOUTHSHIRE.

THE design which is reproduced this week was submitted by Mr. REGINALD BEESLEY, under the motto "Economy." The principal entrance is from Commercial Street, with a wide and well-lighted corridor leading to the grand staircase, where there are also two other entrances, both of which are from New Street. The police-court was placed on the first floor on account of securing better ventilation. It fronts New Street and has separate entrances both for the public and officials. The prisoners will be brought by a direct staircase from the cells to the dock, and the witnesses have also a separate staircase. The magistrates' room adjoins the court, as also does the clerks' room. The assembly-room, which is approached by the grand staircase, is on the first floor, and fronts Commercial Street. The ventilation of the various rooms would chiefly be effected by the arrangement of the windows, fireplaces, &c., but a special means of ventilating the court and assembly-room would be provided by TOBIN'S and BOYLE'S patent ventilators. The court and assembly-room to be lighted with sun-burners, the remaining rooms and staircases with gaseliers. The walls throughout would be built of brick, the cornices, caps, bases, plinths, &c., being of local stone. The estimated cost of the works was 24,450*l*.

A Wrought iron Screen has been placed in the new church of St. Peter, Plymouth. It was designed by Mr. G. H. Fellowes Prynne, and the ironwork was wrought by Messrs. Ellis & Rice.

## THE LATE MR. C. C. OGLE, A.R.I.B.A.

THE following correspondence has passed between the Secretary of the Institute and Mr. J. Hebb:—

"Royal Institute of British Architects, 9 Conduit Street, Hanover Square, London, W., Dec. 19, 1882.—Dear Mr. Hebb,—I am directed to inform you that the Council yesterday took into consideration your hint of the 4th inst. respecting the desirability of expressing the gratification of the Royal Institute of British Architects at the steps just taken by the Government to inquire into the death of Mr. C. C. Ogle, an Associate, who was murdered a few years ago at Volo, in Thessaly. Mr. Ogle, as you doubtless know, was then acting, not as a representative of the Institute, but as a correspondent of *The Times*, and the Council, therefore, consider that they are not in any way called upon to interfere or to express any opinion upon what the Government may deem it right to do in such a matter. I am, yours very truly, WILLIAM H. WHITE, Secretary.—John Hebb, Esq., Metropolitan Board of Works, Spring Gardens, S.W." "Metropolitan Board of Works, Superintending Architect's Department, Spring Gardens, S.W., Dec. 22.—Dear Mr. White,—I beg to thank you for your letter of the 19th inst., communicating the decision of the Council of the Institute with regard to the re-opening of the inquiry into the circumstances of the death of Mr. C. Chaloner Ogle. While acknowledging the courtesy of the Council in taking the matter into consideration, I cannot refrain from expressing my regret that the Council should apparently feel so little interest in the fate, and so little regard for the reputation, of a deceased member of the Institute. Mr. Ogle was not only killed by the Turks, but his memory was most cruelly slandered by the Turkish Government, who alleged, in justification of his murder, that he was killed with arms in his hands, fighting on the side of the insurgents in Thessaly, at the time he was assumed to be discharging the duties of a special correspondent for a newspaper. This scandalous charge was denied and amply disproved at the time of his death, but will no doubt be reiterated. The Council point out that Mr. Ogle met with his death while acting as correspondent of *The Times* newspaper, and not as a representative of the Institute; and that, under these circumstances, they do not feel disposed to express an opinion on the subject. Mr. Ogle was an architect and a member of the Institute. This, I should have thought, was a sufficient title to the sympathy of the representative body of the profession, and I am at a loss to understand the reluctance of the Council to join in expressing the satisfaction which every member of the Institute must feel at the resumption of an inquiry which, in the interests of truth and justice, should never have been postponed. I am, dear Mr. White, yours faithfully, JOHN HEBB.—William H. White, Esq., Secretary Royal Institute of British Architects."

## THE EXPLORATION OF ASIA MINOR.

MR. W. M. RAMSAY, who has just left England to resume his archaeological researches in Asia Minor, recently delivered a lecture to members of the Hellenic Society and others on "Phrygia in its relations to Greek art, literature, and history." After pointing out how its grand physical features were reflected in the somewhat gloomy legends of the people, and how the Phrygians were as a nation far more under the domination of priesthoods than their kinsmen the Greeks ever were, Mr. Ramsay showed that Phrygia was quite cut off from the sea save for one great highway running down from Celenæ to Miletus. Upon this highway, used as a trade route in very early times, depended the whole history of Asia Minor in Greek and Roman times. When Constantinople became the capital of the Roman world the road-system of Asia Minor was revolutionised; new roads were made to connect the provinces with the capital; towns built upon or near the old western route fell into decay. Going back to earlier times, Mr. Ramsay brought arguments to prove that long before the Persian conquest a well-developed civilisation existed along the north side of the plateau of Asia Minor; that there was regular and frequent communication between Sardis and the countries beyond the Halys; and that this communication was carried on, under conditions of order and settled government, along a well-constructed road with a bridge over the Halys. This civilisation was connected with the Phrygian king Midas, whose historical character, enveloped as it is in mythology, has been proved beyond a doubt by the discovery of a tomb inscribed with his name. The destruction of his kingdom by the Cimmerians, about 670 B.C., made a lasting impression on the Greek mind. After this, Phrygia fell under the power of the Lydian kings; its political power never revived, and its art, the strong individuality of which was proved by monuments, lost its national character, until finally Greek art took its place. Alexander's conquest of the country in later times was merely the continuation of a genuine social revolution which the cemeteries of Phrygia showed to have been long going on. Mr. Ramsay proceeded to show that the existence of such a civilised State within reach of Greece, and inhabited by a race kindred to the Greeks, must have had its effect on the development of Greek art. Resemblances were dwelt upon and reason given for believing that the Oriental influences commonly recognised in early Greek art



might have found their way to Greece overland through Phrygia as well as by sea from Phœnicia. Sinope was probably an outlet for Phrygian exports to Greece. It had been proved by Professor E. Curtius that Oriental carpets exercised no small influence on the beginnings of Greek art; and as Phrygian monuments exhibited marked traces of the same influence, it was highly probable that these carpets were carried to Greece through Phrygia; probably many such carpets were made in Phrygia itself. The occurrence on Phrygian tombs of the device of two animals symmetrically placed face to face, as on the famous lion-gate of Mycenæ, was another fact pointing in the same direction, especially when taken in connection with the consistent tradition of the Phrygian origin of the house of Pelops. The lecturer then proceeded to show how the relations between Greece and Phrygia might similarly be traced in early Greek literature and in the legends. In conclusion, he touched upon certain Christian inscriptions whose recent discovery seemed to throw light on the condition of the early Churches in Asia Minor. Professor C. T. Newton, who was in the chair, in thanking Mr. Ramsay for his able and suggestive memoir, expressed the hope that others would be found to follow in his footsteps, whether under the auspices of the Hellenic Society or of the Universities. The clues he had indicated ought to be traced, and if possible cleared up once for all by a trigonometrical survey of the whole of Asia Minor. It may be added that the 500*l.* required to enable Mr. Ramsay to continue his researches for the next five years has not yet been all raised. Subscriptions to the Asia Minor Exploration Fund will be gladly received by Mr. George Macmillan, 29 Bedford Street, Covent Garden, or may be paid in to the account of the fund at Messrs. Roberts, Lubbock & Co., Lombard Street.

### THE INSTITUTION OF CIVIL ENGINEERS.

THE annual general meeting of the Institution was held on December 19, Sir W. G. Armstrong, C.B., F.R.S., the President, in the chair.

In the report of the Council it was remarked that the steady progress which throughout had been characteristic of the Society showed no sign of diminution, and that the Institution occupied a higher position now than at any previous period of its existence.

During the past session 238 candidates had been elected, and 90 names had disappeared from the register, leaving a net gain of 148, which had increased the aggregate of all classes to 3,385, irrespective of the students. Of the latter, 149 had been admitted, and 104 had been removed from the list, leaving an effective increase of 45, and making the total number 707.

Whatever development the work of the Institution might take in the future, the "Minutes of Proceedings" would always rank as its most important production, constituting the tangible and useful result of its labours, and the ground upon which its claim was mainly based to the consideration of the profession. There was one notable distinction between the contents of the early volumes and those at present issued, viz. that the papers reserved for reading now were of a more debateable character than formerly. Attention was specially directed to the "Correspondence" appended to the reports of the discussions. Originated with the idea of eliciting opinions from persons known to be well acquainted with the subjects brought forward, but who were unable to attend the meetings, the value of this departure from pre-established usage became particularly manifest as the debates assumed a more controversial character, inevitable when principles were being considered. It was now deemed better to include accounts of executed works, unless of remarkable novelty and magnitude, or unless illustrative of principles likely to evoke discussion, in Sec. II. of the Proceedings, which was devoted to original communications accepted by the Council for printing without being publicly read. In the award of premiums, no distinction was made between the two classes of papers.

Respecting the financial condition of the Institution, it was stated that the income proper for the year ended on the 30th ult. had amounted to 12,898*l.*; whilst the capital and trust fund receipts were 3,527*l.* and 432*l.* respectively. On the other hand the general expenditure had reached 12,788*l.* This amount included 1,500*l.* on account of the repairs and decoration of the premises; as well as 5,806*l.* the cost of producing the four volumes of "Minutes of Proceedings."

The Council had recently received a communication which recalled the memory of one of the founders of the Institution. This gentleman, Mr. Henry Robinson Palmer, was well known to the last generation of engineers as Telford's chief assistant, and as a Vice-President of this Society. He died in the prime of life in 1844, but his widow survived until this year. Desiring that the honourable connection of her husband with the profession should be perpetuated, she, by a memorandum attached to her will, directed that a sum of 1,500*l.* (less legacy duty) should, on the expiry of a life interest in it, be devoted to found a scholarship at Cambridge University, tenable by the son of a civil engineer who needed the help, the holder to be from time to time nominated by the Council of the Institution. The present Council, for itself and its successors, had accepted the trust.

The report having been adopted, cordial votes of thanks were passed to the President, Vice-Presidents, and Members of Council, for their zeal on behalf of the Institution; to the auditors for the time and trouble they had bestowed in verifying the accounts; and to the secretaries for their services.

The scrutineers announced that the following gentlemen had been duly elected to serve on the Council for the ensuing year: Mr. J. Brunlees, President; Sir J. W. Bazalgette, C.B., Sir Frederick Bramwell, Mr. E. Woods, and Mr. G. B. Bruce, Vice-Presidents; Mr. B. Baker, Mr. J. W. Barry, Mr. G. Berkley, Sir John Coode, Mr. E. A. Cowper, Sir James N. Douglass, Mr. A. Giles, Mr. H. Hayter, Dr. W. Pole, Mr. R. Rawlinson, C.B., Mr. A. M. Rendel, Dr. C. W. Siemens, Mr. D. Stevenson, Sir William Thomson, and Sir J. Whitworth, Bart., other Members of Council.

### YORK ARCHITECTURAL ASSOCIATION.

A MEETING of the York Society was held on the 21st inst. in the Saloon, Victoria Hall, Goodramgate. There was a large attendance of members to hear the first of a series of papers, contributed by members of the association, bearing upon the art and science of architecture, read by Mr. J. Perry, on the "Present Aspect of Architecture in England." Mr. Walter G. Penty, the President, occupied the chair.

Mr. Perry, after referring to the position of architecture as a liberal art, and assigning to an architect the title of artist and craftsman, defined art as the visible or perceivable expression of the creative faculty of the human mind and imagination; and in referring to the architecture of York, said: We need only take a ten minutes' walk from where we are to one of the oldest buildings in our land built by natives, and look upon a piece of undoubtedly genuine Saxon architecture. I allude to the tower of the church of St. Mary's, Bishophill Junior. In another ten minutes, by crossing the new bridge, we can, at St. Denis and St. Margaret's Churches, see Norman work of a pure and richly decorative character; and wandering leisurely on we can in the various churches in the city see specimens of the Early English Decorated and Perpendicular, the Tudor, and Elizabethan styles; while in the glorious Minster we can by careful and painstaking survey study specimens of its numerous styles in their purity and richest beauty.

On the motion of the President, seconded by Mr. Wm. Brown, a hearty vote of thanks was accorded to Mr. Perry for his valuable paper.

### ASSYRIAN BAS-RELIEFS AT ROME.

THE correspondent of the *Standard* in Rome writes:—I have been enabled by special permission to inspect personally the Assyrian bas-reliefs which were casually discovered in the subterranean vaults below the Vatican Library in seven cases. They had been given to Pius IX. by Signor Giovanni Benni, First Dragoman of the French Consulate at Mossul, in 1855, and had been altogether forgotten. They are placed in a long gallery of the Library of the Vatican, where so many priceless MSS. are preserved, and are inserted into the wall spaces beneath the windows. They are altogether sixteen in number, of which two are inscriptions. One of the latter is especially interesting to students of Oriental Archæology, inasmuch as it contains words strange to such eminent authorities as Professor Sayce, of Oxford, and Canon Fabiani, of Rome. The former gentleman (who is at present in Tunis, and is expected to make some interesting studies of Carthage) visited the Assyrian bas-reliefs in the Vatican a short time ago, when he was on his way to Africa. The Commendatore C. M. Descemet, to whose courtesy and intelligent explanations I am much indebted during my visit, this morning told me that Professor Sayce began to read the larger of the two inscriptions in his (M. Descemet's) presence, and soon remarked that there were in it forms and words unfamiliar to him, and pointing to a hitherto unknown idiom, or variety of the Assyrian language. Canon Fabiani is unfortunately not well enough at present to visit the Vatican, but tracings of the two inscriptions were submitted to him, and he at once made a remark similar to that of Professor Sayce. The smaller inscription is more legible. Both are cuneiform, but the larger differs in the form of the letters, as well as of the words, from those with which the erudite are familiar. Copies of them, as well as of what may be called the pictorial bas-reliefs, have been sent to the well-known M. Oppert, at Paris, who considers them of high interest.

I was accompanied this morning by an artist, whose painter's eye was immediately struck by the spirit and faithfulness of many of the delineations. There is, amongst many other instances, the outstretched arm of an archer who has just shot off his arrow and is grasping his bow, admirable for vigour and truth of modelling. Also a kneeling camel—a most difficult animal to draw, as all painters know who have tried him—is portrayed to the life.

The first bas-relief we come to on entering the gallery represents the Assyrian Divinity Nisroc. The god, who is eagle-headed, bears the symbols of the four elements; he carries a pine cone in



one hand to represent fire, a sort of bucket for water in the other, has large wings to indicate the dominion of the air, and the earth is beneath his feet. Another sculpture represents a king adoring the sacred tree, or tree of life, the leaves on which are identical in form with those on a similar tree depicted in the illustrations to Sir Henry Layard's well-known work on Nineveh. Also a group of grooms or servants holding horses bear many points of resemblance to the illustrations in Sir H. Layard's book. For example, the trappings and adornments of the horses are nearly identical in both. There is an interesting group of persons passing a river—presumably the Tigris—on a raft. It consists of two women, a soldier, and the ferryman. All the passengers sit with their faces forward, seen in profile by the spectator, whilst the ferryman stands behind them and steers with a long pole or oar. Another group seems to represent travellers on a journey. The foremost figure carries a sack or bag slung behind him, and something like a small chest on his head, whilst his companion, a female, bears a child astride her shoulders, in the exact attitude with which Eastern travellers are familiar at the present day. Both figures are nude. The sculpture in which the kneeling camel occurs represents a field of battle after the fight is over. Dead and wounded lie on the ground, and the camel is about to be laden with their spoils. To the same category of warlike representations belong the archers alluded to above, of whom some are shooting off arrows, whilst another man holds a huge clypeus or shield, behind cover of which the bowmen take aim; and also the very remarkable bas-relief portraying the siege of a city, with scaling ladders, and a spirited presentment of the killed and wounded being hurled from the battlements. In the costume and armour of the soldiery, and the general conception of methods of warfare, this sculpture singularly reminded me of some of the scenes on the Empress Matilda's famous tapestry at Bayeux. But undoubtedly the superiority of design and perspective is largely on the side of the Assyrian artist. It is noticeable that several of the faces portrayed belong to a high and even beautiful type of humanity—especially fine specimens, one might say, of the Caucasian race—whilst others show a more Arabian or Semitic type. In fact, M. Descemet considers one of the faces to be distinctively Jewish.

### THE ARCHITECTURAL EXHIBITION IN EDINBURGH.

THE Architectural Exhibition in Edinburgh was formally opened in the Galleries on the 22nd inst. Mr. Macgibbon, the President, in welcoming the assembly to the exhibition, said that that duty had fallen into his hands owing to the health of Sir William Fettes Douglas, President of the Royal Scottish Academy, preventing that gentleman being present. Sir William, however, cordially approved of the exhibition, and they regretted his absence, as, had he been able to address them, it would have connected the exhibition with the Academy, and would have reminded the public that architecture was included in the range of arts over which Sir William presided. The President then went on to show the great difference between paintings and architectural drawings. A painting was in itself a complete work of art, while an architectural drawing was only the representation on paper of the real design—the building itself being the completed work of art. It was therefore only natural in the great pressure for space in the Academy that architectural drawings, which were but the shadow of the things they represented, should give place to real and actual works of art in the form of paintings and sculpture. For the same reason the latter were also more attractive to the public, and thus it came about that a good exhibition of architectural works was a thing unknown amongst them. It by no means, however, followed that such an exhibition might not be most interesting and instructive. That, at least, was the view of the matter taken by the Edinburgh Architectural Association, and they resolved to make the experiment of bringing together a large collection of paintings, designs, and other delineations of architectural subjects, hoping that such an exhibition would not only be useful to those connected with the profession, but also interesting and attractive to the public. This idea accorded well with the nature of the Association. Although an Architectural Society, it did not limit its membership to the ranks of the profession, but endeavoured, by opening its doors to all, to diffuse a knowledge of architecture and create an interest in the art amongst the public at large. In order to make the exhibition as attractive as possible, the Association had not limited it to strictly architectural drawings, but had invited paintings, engravings, photographs, and all kinds of illustrations bearing upon architecture. It would thus be seen that the Society had done what they could to bring, as it were, into a focus illustrations of the architecture, not only of our own times and our own country, but of all times and every country; for it was one of the leading characteristics of architecture that its monuments were not limited to any particular time or place—they were universal, and of all times. The history of architecture might be said to be co-extensive with that of man, or, at least, with the history of civilisation. After referring to some leading features of the exhibition, and briefly tracing the operation of various influences in the development of

architecture, Mr. Macgibbon remarked that one direction in which modern architecture was endeavouring to keep abreast with modern civilisation was in clearing out densely crowded and insanitary localities. In the principal cities both at home and abroad improvements of this description had for many years been in progress, and we had around us many fine examples of the splendid buildings which had been substituted for unhealthy dens. Whether for business purposes or for dwellings for the working classes, it was characteristic of the times that all aimed at striking architectural effect. In carrying out improvements it had sometimes been found requisite to remove many picturesque and interesting examples of ancient architecture. In this respect their "own romantic town" had suffered severely; but they might congratulate themselves that so many beautiful reminiscences of the old picturesque houses and closes had been preserved by the industrious and artistic pencil of the late James Drummond, G. Manson, and other artists. The Architectural Association is also doing a little to preserve a record of some of the old buildings by annually publishing a sketch-book containing measured drawings and sketches of old Scotch architecture furnished by the members. The revival of Gothic architecture had had, among other good effects, that of turning attention to the remains of the ancient churches, and had led in many instances to their careful preservation. It was hoped that this exhibition would still further contribute towards that desirable result; and it was also anxiously hoped that, by showing the value and importance of the old Scotch castles and houses, it might lead to a greater interest being taken in these buildings also, and some means being adopted to preserve them from the decay and demolition to which they were nearly all rapidly yielding. Mr. Macgibbon concluded by expressing the thanks of the Association to the contributors to the exhibition.

### THE FIRES OF THE WORLD.

THE Fire King (says a correspondent of the *Times*) levies every year a sum almost equal to the British revenue, for it rarely falls below 70 millions sterling, yet modern science feels a keener interest in observing the transit of Venus than in devising means to check such enormous waste of property. We pride ourselves on being eminently a practical people, and although Great Britain is one of the nations that pay the largest tribute to the Fire King, we submit to it as if it were inevitable, and accustom ourselves to regard it as such. It is not so long since our ancestors in like manner paid yearly tribute to the pirate Dey of Algiers, and in later times we allowed numbers of little chimney-sweeps to be suffocated every Christmas, on the same plea of the inevitable. But means have been found to remedy such things, and if we felt a little more concerned about fires we could reduce their frequency and damage probably 20 per cent., without infringing on those rights of the subject, which should be identical with the *salus populi suprema lex*.

The indifference that Englishmen feel in the matter of fires is not peculiar to our race, but shared by most nations, and reminds us of Sheridan sitting before the blazing ruins of his theatre, and observing "That a man has a right to sit by his own fireside." This fatalism paralyses the British Association, House of Commons, Social Science Congress, and Court of Aldermen, and but for the Press the evil would have no vigilant adversary to oppose its progress. Doubtless the reason why philosophers, statesmen, and aldermen fail even to make an effort is because they regard the insurance companies as the born protectors of the public, forgetting that if fires could be prevented, the companies would have to perambulate the streets, exclaiming, "We have no work to do." A good fire is an excellent advertisement for them, and if fires declined one-half their business would languish. Unfortunately, owing to increased negligence, the number of fires is growing twice as fast as the population, and hence the insurance companies are, in general, prosperous, for the more fires the more money London pays yearly to the companies, viz. :—

	1851-60	1861-70	1871-80
Fires per annum ... ..	977	1,430	1,795
Do., per million inhabitants	389	418	465
Insurance premium ... ..	£870,000	£1,130,000	£1,370,000
Per inhabitant, pence ... ..	82	91	95

Thus London at present pays the companies 40 per cent. more than the cost of maintaining 11,000 metropolitan police, and the annual premium is equal to 5 per cent. of the assessed rental of the metropolis. Our forefathers rebelled against ship money, yet we submit to a much heavier impost, one-third of which we could save by a little prudence. But we are parsimonious in our dealings with Captain Shaw's fire brigade, and extra liberal to the insurance companies. The latter are not to be blamed (as when they refuse to insure a fireman's life, unless on very heavy rates) if they are animated less by dictates of philanthropy than by business principles. They even perform some benefit by spreading over the public those losses which would be ruinous to the individual; but



they are not really guardians against fire, nor is it correct to say "the companies have sustained heavy losses," since all loss falls upon the public. Few people have an adequate idea of the enormous sums annually paid to insurance companies, which amount to the average earning of a million able-bodied men, and yet this is much below 50 per cent. of the entire loss to nations by fire, as shown in the following table :—

	Fire Insurance Premium	Rate of Insur- ance	Ratio of Property Insured	National loss by fire	Do. per inhabitant. Pence
United Kingdom	£ 6,900,000	0.25	46 p.c.	£ 9,100,000	61
France ... ..	3,760,000	0.10	75 "	3,200,000	20
Germany ... ..	6,500,000	0.21	74 "	6,100,000	32
Russia ... ..	900,000	0.50	9 "	21,000,000	60
Belgium... ..	400,000	0.10	43 "	500,000	22
Scandinavia ...	300,000	0.27	27 "	1,000,000	35
United States ...	11,600,000	0.90	15 "	22,500,000	105
Canada ... ..	1,550,000	1.10	30 "	4,100,000	230
The World ... ..	31,910,000	0.27	43 "	67,500,000	59

From the above it appears that the loss per head is greater in the United Kingdom than in any other country of Europe, although, as compared with national wealth, Russia suffers more heavily. If we add one-fourth for indirect losses the damage to Great Britain is 1 per cent. of our national earnings, say three days' labour yearly of our whole population. Notwithstanding the increase of fires, they make little or no impression; those at Wood Street and the Alhambra were almost forgotten in forty-eight hours. The companies pay the policies and the builders set to work again on the blackened sites, just as the inhabitants of Guatemala, after each earthquake, rebuild their houses among the ruins that have entombed some of their friends.

It is time to shake off this apathy, and call a meeting at St. James's Hall to petition Parliament if the municipal authorities still turn a deaf ear to Captain Shaw's solicitations. Above all the public should free itself of the delusion that any improvement can come from the insurance companies, since fires are precisely their *raison d'être*, and it is not fair to expect any more of them than simply to pay the policies for which they charge us the trifle of 1,370,000*l.* per annum, which is fifteen times the sum allowed by our opulent city for the support of Captain Shaw's fire brigade.

### AN ORKNEY TILE BED.

A PAPER was read at a late meeting of the Inverness Field Club by Mr. Ross, architect, on the so-called tessellated pavement at Skail, Orkney, which extends along the tops of the cliffs at an elevation of about 200 feet. The cliffs are exposed to the full action of the Atlantic storms, and the spray dashes over them in a westerly or north-westerly gale, and is carried for fifteen or twenty miles inland, making the wells and springs brackish after a storm. The action of the waves has cleared off much of the turf and soil on the tops of the cliffs for many yards inland, and where the upper layers have been displaced to the depth of a foot or two, these tessellated pavements are exposed. The most perfect beds are exhibited where the full force of the waves is broken by the irregularity of the coast. In some of the cliffs, such as at the Hole o' Row, the action of the water has been so severe as to disturb the beds and displace and break the tiles, but about one-third of a mile north of the brooch the pavements are most extensive and perfect. Old writers have noticed them, and so perfect is the structure of many of the tiles of the platforms, that Wallace in 1700 says gentlemen had their fireplaces tiled with them in the same manner as Dutch tiles were and are now set round our fire recess in some fashionable localities. This tile bed extends over several miles of coast, and a considerable distance inland. The portions now exposed run along about a mile of coast, and vary from a few feet to fifty or sixty yards in breadth. He had submitted the specimens to Mr. Horne, who was always so ready and able to assist them in their investigations, and he forwarded some notes regarding the formation of these pavements. The bed in which this remarkable feature occurs consists of a sandy ironstone, or a sandy carbonate of iron, interbedded with the flagstones of lower old Red Sandstone age. A characteristic feature of these bands of ironstone is the system of jointing, which sometimes assumes the regular forms presented at Skail. The joints do not necessarily traverse the underlying or overlying strata, which shows that the feature is inherent in those bands possessing definite lithological characters. In the Scotch carboniferous rocks, the beds of clay ironstone exhibits this feature in a remarkable degree, and even in those cases where the ironstone occurs in the forms of flattened nodules, the same feature is observable. The development of this system of jointing has been hitherto ascribed to shrinkage, but it is doubtful whether this explains adequately the prevalence of the joints. Whether this be the true explanation or not, of this fact we are certain that they do occur in these beds. It is seldom, however, that such an admirable opportunity is afforded of examining a

jointed band where the tabular pieces present such definite geometrical forms as at Skail, resembling, in fact, a piece of mosaic work, or a tessellated pavement. Still less frequently do we find the tessellæ invested with a grey margin or border, like the frame of a picture, as we find at Skail. This phenomenon has attracted the attention of various writers on Orcadian geology, and notably of Fleming, Jamieson, and Heddle. In a paper by Fleming, contributed to the "Edinburgh New Philosophical Journal," vol. viii., a description is given of the appearance presented by this particular bed, and a probable explanation is given; but though in the main correct, it errs in certain particulars, and does not define the nature of the decomposition which takes place along the joints. The system of jointing was developed in the bed long before its exposure to atmospheric action. In this case, the joints were formed, in all likelihood, during the deposition of the higher members of the series. But so long as there was sufficient animal and vegetable matter to reduce any sesquisalt of iron in the water of the sea in which these old red strata were deposited, no decomposition would ensue. But, when the strata were upheaved so as to form a land surface; and when, after prolonged demidation, this particular bed was exposed to the atmosphere and the action of the sea, certain chemical changes would be set agoing. The oxygenated water, percolating downwards along the joints, would convert the protosalt of iron into the sesquisalt, and gradually dissolve it out. This process would advance inwards on both sides of the original joint, which would, in course of time, give rise to the framework enclosing the tessellæ. The colour of the framework is yellowish-grey, while the colour of the tile set in the frame is dark grey. The difference in colour is clearly distinguishable, and the yellowish-grey margin shows the area, along which the decomposition of the iron carbonate, and the removing of the resulting salt, have taken place. But further, when this decomposition has advanced inwards for some little distance from the original point, the sandy framework yields more readily to atmospheric action than the tessellæ, and hence we have a curious domeshaped arrangement of the tiles with depressed margins.

### THE CLAIMS OF ART.

THE prizes obtained by the students of the Cardiff Science and Art Schools were handed to the students at the annual meeting by Mr. Gambier Parry, who delivered an address upon "The Claims of Art upon an Age of Business." In the course of it he said: Art is not a subject for everybody; I do not say that I wish it were so—far otherwise. Our life as a nation depends on the variety of our powers. We want men who will battle with wind, water, earth, and enemies, and we want other men who will grapple with the difficulties of political and social life. It is the great object of education to supply these wants, and education is abused when it fails to recognise the varying tints and hues of disposition, the varying powers and genius of its pupils. That is what I meant when I said that art was not a subject for everybody. Still, I am convinced that if its motives were better understood it would be adopted, at least in its elements, in the education of all classes. Our age is essentially an "age of business." Everything is business, at least to an Englishman. With the multitude everybody is busy. I question whether they are not too busy; whether the fact of there being so little leisure does not lead to its abuse; whether too much work is not quite as bad as too much play. But the question for us is whether this over-work can not be relieved, and this little play be made more profitable by bringing the arts to bear upon them, and to bring those arts within easy reach of all classes. In other matters our call, as a nation, has been clear, and there is no reason why we should not excel in art if only we go about it in the same way. In the past our people did not care for ideal art. Their taste in such matters was naturalistic for that which gave them no trouble to think about. Hence our most popular artists have been the representers of domestic scenes, or simple natural subjects, which told their own story at once, like those of Wilkie and Landseer. The works of those great men, however, were full of poetry; but it was not so much the poetry which those works expressed as the simple facts which they represented that our people cared for most. There was no lack of genius in those arts; what we lacked was the power, the intelligence, the refinement, of the public to draw it forth, to foster, or to appreciate it. But the scene is changing now, and rapidly. Those realities in the romance of discouragement and sorrow which made up the lives of so many of our artists and men of genius are not likely to be repeated. Our people are opening their eyes and their hearts to the beauty of their national artists' works. "Industry and Courage" must be our motto in art as in everything else. We cannot live like lazzaroni on a sunny wall and half a melon, nor like the emancipated slaves of St. Domingo on sleep and a sugar cane. I may say, I hope without offence, that the mere commercial view of things may be, and often is, low, immoral, sordid, and selfish. But the use of the finer arts in connection with commerce is to correct this unhappiness. There is nothing low, sordid, or selfish about them. The arts indeed might be the very handmaids of commerce—



bright and healthy. Their very pleasantness would cheer the spirit of the working man. His hand would work all the more blithely because his heart would be more blithe. He must live by his work—it is his honour to do so. But his mind would be refreshed in the dulness of his work by brighter, happier thoughts. That is the stuff that art is made of for the working man. I therefore urge it upon you as an element in his education on the most utilitarian grounds. And more than that, I urge it on gentlemen of commerce, versed in all the mysteries of home trade and foreign competition, that art is not only a thing desirable for moral and social reasons, but absolutely necessary in our commercial relations with the world. I by no means wish to put art upon stilts; I by no means wish to put it in a false position of importance. But I believe it is this—it is the thing which is wanted to trim the balance of our national character, to correct its hardness, its coarseness, its vulgarity, and to draw out its finer and not the less great and noble qualities. I look upon it as a great field which we have only half cultivated. I believe that thousands of our workmen have been forced into trades unsuited to them, occupations which were repulsive to them. The world has dealt harshly with them. The idea of a common working man having tastes and talents, definite and refined aptitude, and even genius hidden beneath his rough exterior, has been in past times ignored. His heart yearned for other things. He felt like a racehorse harnessed to do cart-horse duty. He became indolent, depressed, dispirited. His temper embittered, his life resourceless, drove him to vice for relief, and then vice drove him into crime. I suspect that this was neither an exaggerated nor uncommon picture, that such a man as I describe, who might have been happy in himself and an honour to his family and his country, became an outcast and a criminal. The capacity for artistic pursuits among our people is being developed with a rapidity that is satisfactory to ourselves and surprising to our neighbours. We have always been a people famous for our ingenuity. Practical art is but cultivated ingenuity. Our art manufactures have begun to compete successfully with those of the most artistic nations. Our art schools are turning out accomplished draughtsmen, and scattering widely a general knowledge of art principles to the advantage and happiness of our people. If, then, by such means as all these we can supply the increasing demand at home and abroad for better style and purer design in all our manufactures, our woven fabrics, our china, our glass, and our metal work, we shall have made a great gain commercially. If by these means we can improve our cities, clear them of the eyesores of modern vulgarity, and erect monuments more worthy of our times, we shall have gained in the cheerfulness of our people, in our own self-respect, and in the honour of our neighbours. If by these means we can supply fresh opportunities of employment, fresh occasions of enjoyment, fresh outlets for the various talents of our mixed English race, I think we shall have made good our claim for development of our national arts on the highest scale; and I trust that we make it with success.

### METROPOLITAN MORTAR.

AT the Worship Street Police Court on the 21st inst. Mr. Bushby gave judgment in a case between the Metropolitan Board of Works and Mr. S. Muncey, builder, Hackney Wick. In August last at the same police court proceedings were taken by Mr. Alexander Payne, the district surveyor of East Hackney (South) and North Bow, against the defendant for using mortar not composed of good sharp sand without earthy matter, as required by the bye-laws of the Board, in which case the defendant was fined 60s., but he continued to use inferior mortar and proceeded to complete the buildings without pulling down any of the condemned parts. The Metropolitan Board of Works therefore were driven to take proceedings, under the Metropolis Management and Buildings Acts Amendment Act 1878, for an order to pull down the houses. The case first came on on November 2, and was adjourned several times on technical points raised by the defendant's counsel. On November 30 the case for the prosecution was heard.

Mr. Besley appeared on behalf of the Metropolitan Board of Works, and stated that the Board, having regard to their duties to the public, felt that the fine of 60s. already imposed would not cure the evil and ensure the use of good mortar in the future; it was therefore necessary for them to ask for an order to pull down under section 17 of the Act of 1878.

Mr. A. Payne, the district surveyor of the district, produced specimens of the mortar and material used for sand, and gave the dates of his various inspections of the buildings. The mortar was not such as is required by the bye-laws, as it was not composed of clean sharp sand, and was full of earthy matter; it easily crumbled and did not adhere to the bricks, and when put in water dissolved into something like mud. There had been no improvement in the building, nor had any part been pulled down.

Mr. Thomas Blashill, district surveyor of the adjoining district, was then called, and stated that he had inspected the buildings with the last witness on November 27, and taken speci-

mens of mortar from the back addition. The mortar was not in accordance with the Board's bye-laws. There was some gritty substance in it; but there was also earthy matter, and it did not hold together or adhere to the bricks. Houses built with such a material would be more damp and unhealthy than if built with proper mortar.

This concluded the case for the prosecution.

The defendant's counsel, Mr. R. B. Muir, then asked the magistrate to take down the following objections:—

1. That proceedings could not be taken against the builder after he had completed the work; they should be taken against the occupier.

2. That the bye-laws were *ultra vires*, as under section 12, 1855, the Board had no power to make bye-laws about mortar; and

3. That the notice of the district surveyor was not explicit enough in specifying what part of the buildings were to be pulled down. He then said he would show that the mortar was in accordance with the Board's bye-laws.

Mr. Uriah B. Broadribb was called, and said he was a surveyor, and manager to Messrs. Reddall & Sons. He had superintended the building of the houses on the estate; he had no fault to find with the mortar from the houses. He produced a sample taken from the back additions; the quality was rather variable. He should say, according to the cottage sort of property, they were of first-class construction.

In cross-examination, witness said he had no specimens that day from the main building. He had given evidence on the former occasion when the defendant was fined 60s. In his opinion that was a wrong judgment, and no part of the buildings had been taken down. Mr. Muncey only found the labour on the job; the freeholder found the materials. Witness saw a large load of sand brought to the job; this was in the beginning of August; the main walls were then up.

Being asked as to where the sand came from before that time, witness mentioned a lot of concrete that had been taken from various roads. It was not his province to superintend the mixing of the mortar. Being asked by the magistrate, he said the name of the freeholder was Mr. J. F. Raw.

Mr. S. Muncey, the builder, was called, and stated that the mortar was composed of Thames sand, mixed in the proportion of two or three of sand to one of lime; there was also a small portion of sifted ballast mixed with it. He was finishing the houses by day-work; the money was advanced by a solicitor, Mr. Raw, at so much a week. He had given notice to Mr. Payne as builder; he was fined 60s. for the mortar, but had not pulled down any part of the buildings. He had had four barges of sand to the houses; there was no perceptible loam in the mortar.

Several workmen were then called and deposed to having mixed the mortar and carted sand on to the job, but they could give no dates.

A local builder was called who produced a specimen of the mortar, which he said was good. In cross-examination he stated that he had served his apprenticeship as a carpenter, but had had a great deal of general experience, and had been the foreman of large works.

The district surveyor was then called, and said he had examined the specimens submitted for the defence; they contained earthy matter, nor was there any evidence of good Thames sand about them.

Mr. Blashill was re-examined, and said that the specimens did not contain Thames sand, and that there was dirt and earthy matter in them.

The magistrate said he would examine the specimens and give judgment on December 21.

Mr. Besley, for the Metropolitan Board of Works, said that if his worship liked to call in the assistance of a professional adviser he would agree on behalf of the Board to pay half the expense whichever way it went.

On December 21 the magistrate said that an analysis of this mortar would cost 21s., and that if either side were willing to pay for this he would have it adjourned to see the result; otherwise he was willing himself to give judgment from the evidence and from the specimens he had seen.

Mr. Burton, who attended on behalf of the Metropolitan Board of Works, said he was quite willing to accept his worship's judgment.

Mr. Raw, on behalf of the defendant, said he was perfectly willing to accept the magistrate's judgment, presuming that, if he decided in favour of the Board, he would allow the points he had raised to be brought before the superior court.

The magistrate then referred to the points, namely, as to whether the builder was the right party to proceed against, whether the bye-laws were *ultra vires*, and whether the notice was vague. He said he could not grant a case upon them; he did not like to send up to the Court of Queen's Bench points which they would pooh-pooh at once. The defendant would have to apply for a *mandamus*. Mr. Bushby then delivered judgment. He said he had heard the evidence and had examined the specimens of mortar produced. Some of these crumbled in the hand; it was no answer for the defendant to bring other specimens which did not crumble unless he could show that the specimens brought by



the prosecution were not taken from the houses, which he never ventured to do. Therefore he ruled that these buildings had not been constructed of solid strong mortar according to the meaning of the Act, and he gave the order prayed for.

Mr. Burton then, on behalf of the Board, asked for costs.

The magistrate said he was not in the habit of granting costs except where there was something like wilful malfeasance; but in this case there really was something like that, because there had been a previous order, and fines inflicted in consequence of this mortar having been adjudged to be bad; but not the slightest action had been taken by the defendant, thus compelling the Board to take fresh proceedings. He should therefore grant the costs, but they would be limited to the costs of one day.

### PRE-HISTORIC ARCHÆOLOGY.

IN the last of his course of twelve lectures at Carlisle on "Europe in Pre-Historic Times," Mr. Marr said that the science of pre-historic archæology was only in its infancy. It had been studied only for about half a century, and the result was that, as in the case of young and flourishing societies, along with the theories which would probably hold good eventually, there were a number of other theories which might be spoken of as working hypotheses which were very convenient, but which might be disproved when more facts were collected. A difficulty which often arose in the study of such a subject was to distinguish between these working hypotheses and those theories which were likely to stand the test of time. He examined some of the difficulties referred to. From the study of the organic remains and the physical character of the deposits in the British islands, it had been established that these deposits had not been formed by any violent action, but that they had accumulated gradually; and therefore they must admit that 50 or 100 feet of sediment containing the relics of man had been formed very recently, as compared with the oldest sediment which did not contain those human remains. Although this was the case, nevertheless the tests which applied to the older deposits might also be applied to the deposits containing human relics. He had told them that in trying to get some idea of the history of any geological deposits there were two kinds of tests to be applied, viz. the test of superposition and that of the existence of organic and other remains. Applying these tests he showed that the classification of pre-historic peoples was such as they had had reason to adopt in this course of lectures. They had no absolute proof of the classification, but the proofs that existed rendered its truth pretty nearly a certainty. Having established this classification, and shown that the order of succession of the pre-historic peoples in the European Continent was as had been taught, river drift man and then cave man of Palæolithic times, neolithic man and the men of the bronze and early iron ages, he passed on to review the sequence of events which had taken place during the periods referred to; and as they had seen that the order of succession in all the arrears of the European Continent was similar he confined himself to a general summary of what had taken place in Britain. Coming to the time of the first trustworthy records, he said that even in historic times both geology and pre-historic archæology were of considerable importance, giving them a clue to important deductions. In the first place to consider pre-historic archæology. They learned from it how different inhabitants of our own island got different characteristics; they learned, for instance, why the inhabitants of Denbighshire were of a swarthy appearance with black hair and short stature, whilst many of the inhabitants of Scotland were tall and very much fairer. They learned that this was because they were of different races, that whereas one belonged to one race the other belonged to another. Then take an instance of the value of geology. Geology also taught us how the inhabitants of different parts of our island came by certain of their characteristics. They found, for instance, that the inhabitant of this district was usually characterised by a considerable amount of strength and physical endurance, whereas the inhabitant of some of the more fertile areas of the south of England was by no means so strong as the inhabitant of this part of the world. They found that this was due to the fact that the northerner, to use a cant term, had had to struggle for existence against adverse conditions of the soil; that in order to cultivate this soil he had had constantly to struggle to get his living, whereas the inhabitant of such areas as Gloucestershire could with little difficulty produce enough of cereals for his own existence. They found that this difference to which he was pointing was owing to the difference in the geological structure of the two districts compared. We had a hardy race reared up in this part of the world, whereas in the south the people were, physically speaking, very much weaker. This was only an isolated instance which he had selected; but from a consideration of similar instances over Britain and Europe, Professor Geikie had come to the conclusion that the geological structure of a country had played a very important part indeed in the physical characteristics of the dwellers therein. Mention of history reminded one of the methods which had been pursued in considering pre-historic

archæology. They were very much the same as those practically which were adopted by historians. He need hardly remind them that the chronicling of a number of facts did not constitute a history. In fact to write a history nothing helped the writer so much as the possession of a powerful imagination; and this powerful imagination had been used even in the writing of trustworthy histories. The same thing was the case in pre-historic archæology as in other sciences. The facts were preserved by nature, and the pre-historic archæologist had to draw upon his imagination to weave a connected history as a historian had to draw upon his imagination to weave a connected history from the facts which were left to him. The classification of the pre-historic ages as had been taught was as well established as English history into different reigns.



### Middlemen in Art.

SIR,—There is doubtless much truth in what your correspondent "W. M." says about "Middlemen in Art;" but is not the architect himself too much of a middleman to join in the hue and cry against them?

Is not, in fact, the position which the architect assumes practically an impossible one in these days? Can he possibly be master of all that is comprised under the head of architecture? And is it not because he has overreached himself, in claiming all that he does claim, that he has fallen (by his own confession) into something like disrepute with the general public?

It is no fault of the architect that he cannot know all that an architect is assumed to know; but whose fault but his own is it that he is assumed to know everything? When a man is found out in one act of pretence, he is, perhaps too hastily, put down as a pretender altogether, but he can hardly complain if that is the case.

Why should an architect be ashamed to acknowledge the assistance he gets from the engineer, the man of science, the artist, or the craftsman, unless he fear that their merit will overshadow his own? And if that be so, what right has he to take the whole credit to himself?

There are architects who are sure enough of themselves to give others who assist them their full share of credit, and all perhaps do so in proportion to their confidence in themselves. But the large body of the profession does as little of the kind as possible, and prefers, for example, to deal with a tradesman who is content with his profit, rather than with an artist who may lay some claim to having "invested the work with artistic merit." The *raison d'être* of such professors is not very obvious, least of all is it so to the "barnacles" upon whom they live.

I am, Sir, yours faithfully,  
NEITHER THE ONE NOR THE OTHER.

### REVIEWS.

#### THE DECORATOR AND FURNISHER.

WE have received from New York the first number of the first volume of *The Decorator and Furnisher*, a monthly journal, of which the title indicates the purpose and pretensions. The list of contributors comprises a chief proportion of names with English addresses attached, but to judge by the specimen number the main bulk of the matter presented to the reader, and the most numerous illustrations, will be, as they should be, of American origin and growth.

The form adopted gives a page almost double that of *The Architect*, inconveniently large in itself, and not due to the requirements of any style of illustration that is useful or appropriate to the subjects. The illustrations given are numerous, varied, and sufficiently elaborate; they include reproductions of sketches by members of a charcoal club, diagrams and patterns, designs for furniture, mantels, cabinets, screens, ceilings, large plates of furnished interiors, a library and a dining-room, and a large coloured plate of decorative combinations in ten colours.

If we are to accept these designs as fairly representative of the present phase of American taste or fashion in decorative furnishing, the opinion is not to be suppressed that the forms which it affects are far too predominantly—indeed, are all but exclusively rectangular. Walls and ceilings are divided into squares and oblongs, chairs have square flat seats and square upright backs, and if the table in the "Dining-room Interior," with all its legs and bars, is to be accepted as a dining table, and the chairs as chairs for the guests, the problem of how the guests are ever to get on terms with their dinner is one of which we should be curious to witness the experimental solution. These observations, however, do but tend to indicate the opportunity which is open to the editors of this new journal to supply both corrective



criticism and improved models. It commences with a display of energy which is most promising for the future, and encourages the expectation that it will keep as clear of being the one-sided advocate of the prepossessions of a narrow clique as of becoming an organ of latent trade advertising. Nothing can be more gratifying than still another example set of a desire to bring into as close communication as possible the thoughts and theories, the works and aspirations of artists and artisans on both sides the Atlantic.

We are only giving an additional proof of sympathy with *The Decorator and Furnisher* of New York if in the interests of gracefulness we urge that whatever good sense may be involved in such paragraphs as follow should only be admitted to its columns in terms very sternly revised:—

"Speaking of good times reminds us that we want some first-class canvassers—some of the kind that can capture a subscription at sight. This seems to be a good opening for some regular lightning-rod purveyors."

Again—"Mr. George R. Halm, whose name is familiar to readers of art papers and lovers of art work, has taken charge of the artistic end of *The American Agriculturist*, and we have no doubt under Mr. Halm's management the success of this long neglected feature will assume the proportions of a boom."

## LEGAL.

Ipswich County Court, Dec. 20.

(Before Sir F. ROXBURGH, Q.C., Judge.)

JACOBS v. BORRETT.

The Employers' Liability Act.

THE plaintiff in this case was a labourer, and he sought to recover 16*l.* 19*s.* 4*d.* damages for loss of work and injury sustained by the alleged negligence of the defendant, a builder. Plaintiff was employed by defendant in taking bolts from the scaffolding of the tower of St. Lawrence Church. He held the punch in his hand, and Mr. Borrett was striking at it with the hammer, when he struck Jacobs's fingers, causing him permanent injury. The claim was laid under the Employers' Liability Act.

It was contended on the part of defendant that the action could not come within the scope of the Act.

His Honour was of the same opinion, but said it needed not to interfere with the action, which was really one to claim compensation for the personal negligence of his employer.

The plaintiff said he was a labourer, and on the 10th of October was engaged by Mr. Borrett in taking out the bolts of the scaffolding around St. Lawrence Church steeple. Whilst so engaged the defendant went up to him and took the hammer whilst plaintiff held the punch, which was then struck several times by Mr. Borrett. Unfortunately, Mr. Borrett once missed his aim and struck the plaintiff's finger with the hammer. It was hurt very much. Plaintiff kept at work till the second day, when he was compelled to go to the East Suffolk Hospital, remaining an out-patient of that institution from the 11th to the 31st October. He did a little work with his other hand in the meantime. The hand, after the 31st of October, began to discharge, and Jacobs was again treated at the hospital. After this defendant said the man would have to make out a claim, and he would give it to the Liability Act Insurance Company. He also asked the plaintiff to copy a piece of paper which he gave him. The claim was made up by three weeks' wages, at 18*s.* 8*d.* a week, and 10*l.* 10*s.* for injury received, and he had received 14*s.* from the plaintiff. He was unable to use the injured hand as in the past.

Plaintiff was cross-examined as to the way in which he was holding the punch; as to the length of the punch; as to his usual earnings, and as to whether he was not employed during the time in which he was an out-patient at the hospital. The paper he had copied was a claim of 2*l.* 4*s.* 9*d.*, which was made out by Mr. Borrett to send to the Liability Act Insurance Company, who, however, considered it was not a case to come under their notice, and then the defendant refused to pay. Plaintiff would then have accepted the 2*l.* 4*s.* 9*d.*, but he should not have thought that sufficient compensation.

The resident surgeon at the East Suffolk Hospital said that one of plaintiff's fingers was broken. The man did some work, but the finger was again broken after being set, and had again to be surgically treated.

In defence, it was contended that the negligence was on the part of the plaintiff, holding, as he did, the punch in an improper way.

Mr. Charles Borrett, the defendant, said he had the contract for refacing the St. Lawrence tower. The plaintiff assisted in taking the scaffolding down, and on the 10th of October he was holding the punch whilst defendant was striking it with a hammer to take out the bolts, when the accident occurred through the improper way in which the man held the punch.

His Honour: Then why did you not tell him of it?

Defendant said he had done so previously. It was quite an incident when, missing the punch, the hammer struck the plaintiff's fingers. The man, however, worked all that day and part of the next, and then, acting upon defendant's advice, he went to the hospital.

Plaintiff had worked since, and had applied to Mr. Borrett for work, making no complaint as to his finger.

Cross-examined: Defendant did send the claim of 2*l.* 4*s.* 9*d.* to the Insurance Company. He had no occasion to caution the plaintiff as to the way in which he held the punch. He saw that he was holding the punch improperly between his fingers.

His Honour said the question he had to decide was whether the injury was caused by the negligence of the defendant. This was proved in the affirmative from the evidence of the defendant himself. He made out himself, for the plaintiff, a claim upon the policy he held in the Insurance Company for accidents to workmen through negligence. It was thus proved that he himself knew there was negligence on the part of some one, and it must have been on the part of Mr. Borrett himself. His Honour accordingly gave judgment for 15*l.* 19*s.* 4*d.*, disallowing 10*s.* of the claim for damage.

## ENGINEERING WORKS.

**Dock Work in Adelaide.**—The chief city of South Australia has taken steps for the construction of an ocean dock of nearly 30 acres in extent, and 30 ft. deep at low water. The site is said to be excellently chosen, and the approach will be of the easiest character. The dock will afford harbourage for vessels of the largest class, and will be provided with modern appliances for docking, loading, and discharging vessels in all states of the weather. Railway communication between Adelaide and Melbourne is being established, and already a line of rail connects the capitals of Victoria and New South Wales, so that within a few years passengers and mails will be landed at Adelaide for all parts of Australia, and will reach their destination by rail, while the goods for other colonies will be discharged into inter-colonial steamers of a class much superior to those now running. The steamers will reload with coal from New South Wales to supply the large ocean steamers in the terminal part of Adelaide. As an evidence of the faith which the South Australians have in the development of their colony, it may be stated that the capital required for these vast works, which cannot be far short of a million, is to be provided by private enterprise.

**Magdalen Bridge, Oxford.**—The works in connection with the widening of this bridge have been retarded in consequence of the October floods. The water overflowed the dams which had been driven across the north-eastern stream, and submerged the work which had been commenced in the foundations of the river piers and abutments, completely stopping the work at that end of the bridge. It has been found necessary to drive a new dam across the river below the bridge, the old one having been so much strained by the force of the water as to be useless. The water has been again pumped out, and the workmen are now busily engaged, night and day, excavating the river bed to receive the inverted arches between the piers of the old and new structures. It is hoped that this portion of the works may be done without further interruption from floods, and to that end they will be pushed forward with all possible speed. The flood has not greatly hindered the progress of the work on the other portions of the bridge. All the piles for the foundations have been driven, and the foundations finished. The massive timber centres, which carried the river arches at the south-west end, have been removed, and the fixing of the balustrade above the arches is about to be begun. There has been but little time lost considering the unfavourable weather of the last three months. The flood of October has done no damage to the new work. The temporary works, however, such as dams and bridge, have been considerably shaken by the force of the stream, and have had to be thoroughly repaired.

## ARCHÆOLOGY.

**The Schaffhausen Onyx.**—The Historical-Antiquarian Society of Schaffhausen have celebrated their fiftieth anniversary by issuing an illustrated eight-paged folio, containing a description and history of the celebrated Schaffhausen onyx, which for several centuries, probably since the defeat of Charles the Bold at Grandson in 1476, has been one of the most cherished treasures of the commune. The illustrations are *chefs-d'œuvre* of chromolithography, and the text is written by the learned antiquary Professor Dr. J. J. Oeri. The figure engraved on the stone is a female wearing a crown of honour, and holding in one hand a horn of plenty, in the other a Mercury's staff. Dr. Oeri identifies the figure as that of Pax, and the cameo, he thinks, was cut between A.D. 68 and 82, probably as a memorial of the reorganisation of the Roman Empire by Vespasian and the suppression of the rebellions in Gaul, Germany, and Judea. The setting of the stone, which is very large and beautifully marked, is to the full as valuable and curious as the onyx itself. It is a masterwork of mediæval art, the significance of which has only of late been rightly understood, consisting of a triple golden wreath of lions and eagles in relief, interspersed with leaves, and ornamented with pearls and other stones of price. On the reverse side is a plate of silver gilt, bearing the effigy, in intaglio, of a knight on horseback. The



inscription shows that the talisman (for such it was doubtless considered) belonged at one time to a Count Ludwig von Frohburg. Dr. Oeri has no doubt that this was Ludwig, the second count of that name, a faithful friend and loyal subject of Kaiser Friedrich II., whom, with his brother Hermann, he accompanied to Basle in 1212. He was at Basle a second time in 1223, and it is on record that he was with Friedrich at St. Germans in 1225, at Rimini in 1226, Montefiascone in 1245, and in 1254 at Verona. Ludwig von Frohburg was evidently one of the most important minor personages of his time. He was closely allied with the Hapsburgs, his wife being Gertrude, aunt of King Rudolf, the founder of the house, and it was probably about the time of his marriage with this lady that the onyx was placed in its present setting. This is inferred from the predominant colours of the jewels, red, white, and blue, with which it is ornamented, and from the fact that the eagle was the cognisance of the Frohburgs, and the lion that of the Hapsburgs. How the cameo came into the hands of Count Ludwig can only be conjectured. Dr. Oeri is of opinion—and there is nothing improbable in the supposition—that the onyx was brought from Constantinople by Orlieb von Frohburg, who was Bishop of Basle from 1137 to 1164, a trusted friend of Konrad III. and Friedrich I., and took part in the Second Crusade. The later history of the gem is obscure, nor can it be ascertained for certain how it came into possession of the Canton of Schaffhausen. No mention of it in the communal "Treasure Book" can be found earlier than 1619, when it appears in a list of objects worthy of being preserved in the vaults of the Stadthaus. But there is a tradition that the onyx was part of the loot made at "the glorious victory of Grandson" by the Schaffhausen contingent of the confederate forces. This is likely enough, or if not at Grandson, then at Morat or Nancy, by them or some of their allies, for the talisman must have been the highly-prized possession of a royal or knightly owner, and only as spoil of war is it likely to have been acquired by a Swiss canton. When the French "redeemed" and robbed the country in 1798 the onyx narrowly missed falling into their hands. It was saved from the depredations of Rapinat, the most rapacious of the commissioners who followed in the wake of the French army, and whose memory is still detested in Switzerland, by Johann Müller, the historian. "The Burgundy relic," he wrote to his brother, "is safe in my desk. It is to be hoped Rapinat will come no more. I should like to steal it." And so, probably, would most antiquaries—or buy it. But the Schaffhausen onyx is now too well guarded to be stolen, and too rich in associations to be sold, even by a thrifty Swiss canton.

### GENERAL.

**Mr. C. H. Cooke, F.S.A.**, has been awarded the thanks of the National Lifeboat Institution, in acknowledgment of his valuable services, during the past twenty-five years, in building, from his own designs and specifications, two hundred and sixty-five lifeboat houses on various parts of the coasts of the United Kingdom.

**Mr. W. J. Boys**, Borough Surveyor of Walsall, died suddenly from apoplexy on Thursday in last week.

**Mr. G. J. Ferguson** has made a report on the condition of the dilapidated parish church of Ormside. The earliest trace of a church there was found to have been built fifty years later than the Norman Conquest, the plan of which edifice could be distinctly followed.

**Mr. Ruskin**, it is understood, has, in compliance with the request of his friends agreed to again accept the Slade Professorship at Oxford, and to deliver the six lectures as stipulated in the conditions of the office.

**Mr. A. T. Walmisley, C.E.**, will commence a course of eight weekly lectures in the hall of the Society of Engineers on January 8, upon Land Surveying and Levelling. The course is comprehensive and useful.

**A Donation** of 2,000*l.* has been received from Messrs. M. & J. C. Williams towards the erection of the transept of Truro Cathedral. Mr. Pearson recommends that the work should be undertaken at once. The cost will be about 6,000*l.*

**Canon Gregory** has appealed to the public for subscriptions towards completing the English church at Rome. The funds in hand are sufficient to carry the walls up to the wall plate, but nothing will be left for the roof and fittings.

**Ryburgh Church**, Fakenham, has been lighted by coronæ and pendants which are fitted with the patent three-wick Hesperus lamp of Messrs. Jones & Willis.

**A Church** is to be built at Stainland from the designs of Mr. Barber, of Halifax, who has been appointed architect.

**Christmas and New Year's Cards.**—In the remarks on cards which appeared in *The Architect* of December 9, the name of another firm was substituted for Messrs. Hildesheimer & Co., whose productions have been signally successful.

**The Washington Monument** has reached a height of 340 feet. During the year 90 feet have been added. It is expected to be completed in 1884, when the entire height will be 550 feet.

**A Memorial Chapel**, school, and manse are to be erected at Epworth, the birthplace of John and Charles Wesley, at an estimated outlay of 7,000*l.*

**Plans showing improved entrances and exits to the Criterion Theatre** have been submitted to the Board of Works. It is proposed to have open areas on two sides at least of the building, the adjoining property having been acquired for the purpose.

**A Steam Tramway** connecting the suburb of Aston with Birmingham has been completed.

**The Archway** discovered in the south transept of Northallerton church, and supposed to be the entrance to the south aisle of an original broader chancel, proves to be a niche for an early stone altar by a piscina being discovered at the right side of the niche, which still bears traces of early English painting.

**A Parsonage** is about to be erected in connection with the district of St. James the Less, Ancoats, Manchester. A site has been selected adjoining the church.

**A Meeting** has been held in Cork, at which it was decided to hold an exhibition of manufactures, arts, and industries next year. A similar exhibition was held in 1852, and was successful.

**The Council of the Surrey Archaeological Society** have passed the following resolution:—"That the Council of the Surrey Archaeological Society, having heard with great regret that there is a probability of the destruction of the ancient Archiepiscopal Palace at Croydon, earnestly deprecate any injury being done to such a venerable monument of antiquity, and are desirous of being placed in communication with any person, or bodies of persons, who are taking active steps with the object of preserving this interesting building."

**The Design** of Mr. Charles Barry for roofing the central space of the Royal Exchange has been selected by the Gresham Sub-Committee.

**A Collection** of Celtic antiquities, formed by the late Mr. G. A. Robinson, has been presented to the Museum of the Yorkshire Philosophical Society, York.

**The Council** of the Huddersfield Technical School and Mechanics' Institute intend to hold a Fine Art and Industrial Exhibition during the summer of 1883, in connection with the opening of their new building in June next.

**Works** have been begun at Langley Castle with a view to rendering part of the castle fit for habitation.

**The subscription** at New York for the pedestal to the statue of Liberty now reaches \$62,210.

**The "Nottingham Guardian"** says that a committee have decided to recommend the Town Council to increase the Borough Surveyor's salary from 400*l.* to 600*l.* per annum. Mr. Brown was formerly Assistant Surveyor under Mr. M. O. Tarbotton.

**The Marble Head of Apollo**, which formerly belonged to Sir Richard Worsley, and was lately found in a shed at St. Lawrence, Ventnor, has been presented to the British Museum by Mr. Pelham. The head has been measured by Mr. A. S. Murray, and has been found to agree exactly in its measurements with the Cyrene and the Choiseul-Gouffin heads of Apollo in the British Museum, and also with the head of the statue of Apollo at Athens.

**A Volume** of allegorical drawings by Jean Cousin, showing the struggle between Man and Fortune, has been reproduced in Paris, under the superintendence of M. Eugène Muntz. It contains about two hundred designs, which have hitherto lain unnoticed in the library of the Institute.

**A Discovery** has lately been made in Pompeii which is well worth noting. Not many days have passed since a quadri-valve speculum of great beauty and in a high state of preservation was turned up. By competent persons who have examined it the mechanism of it is said to be very ingenious. In the National Museum of Naples there are now three Pompeian specula—one a bi-valve, one a tri-valve, and the one just found, a quadri-valve. The last is said to be of a construction so uniform and well proportioned, admitting the expansion of the valves, as to be superior to modern construction. It is noted as a curious fact that in its various dimensions it observes constantly the centimetric measurement.

**Corean Houses.**—A report has been prepared by Mr. Ashton, who accompanied the British squadron to the Corean ports. The town of Wönsan contains about 2,000 houses. The houses consist of a kitchen with an earthen floor, and two or three other rooms, seldom more than 8 ft. or 9 ft. square, with ceilings about 6 ft. or 7 ft. in height. They are of one storey only, with thatched roofs, the eaves being only 6 ft. or 7 ft. from the ground. The framework is of wood, the interstices being filled with woven reeds plastered with clay. The floors are matted, and carpets of thick oilpaper are sometimes seen. There is no furniture.



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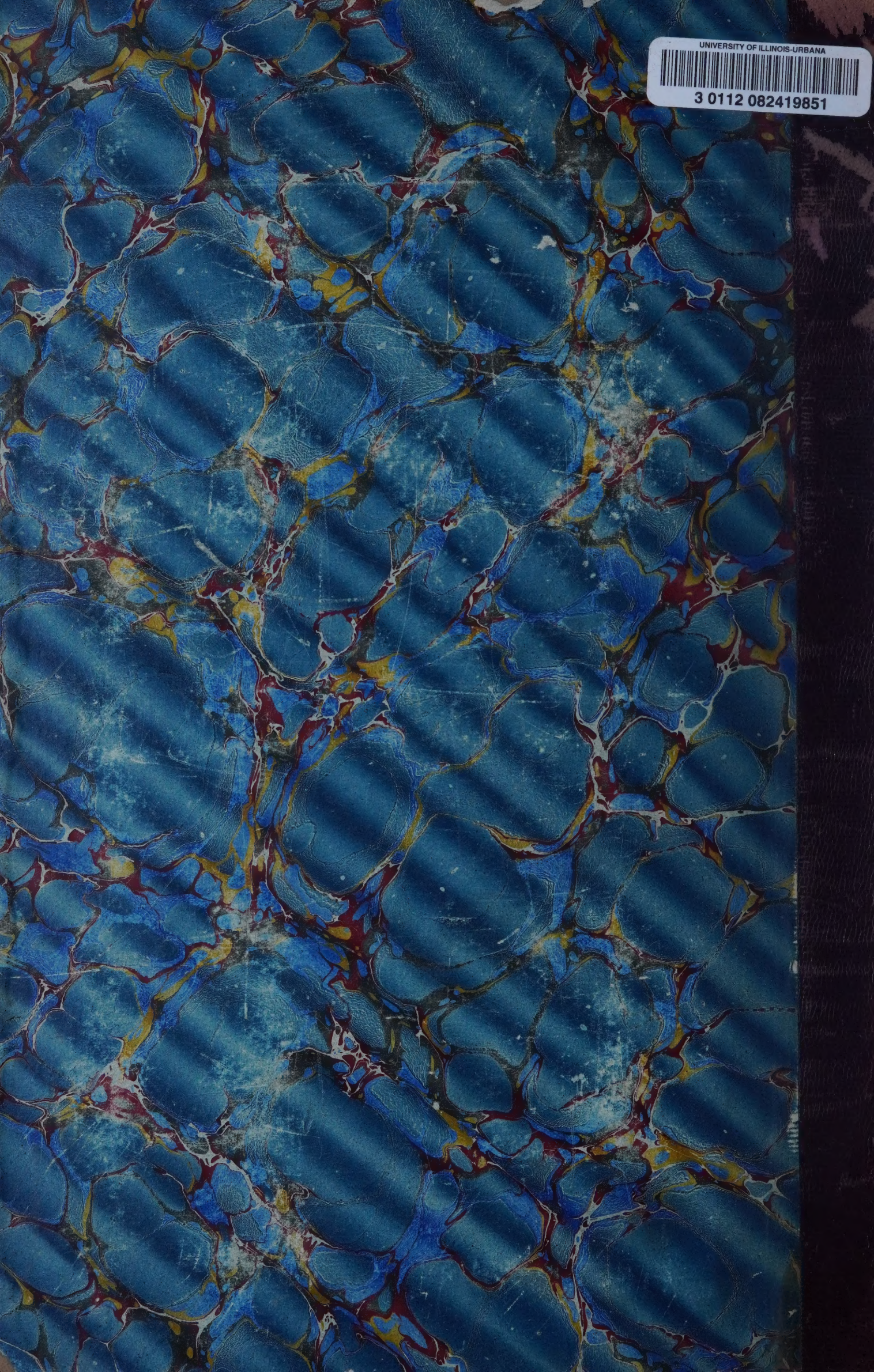












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